AUGUST, 1960

Lighting

Special School- and Church-Lighting

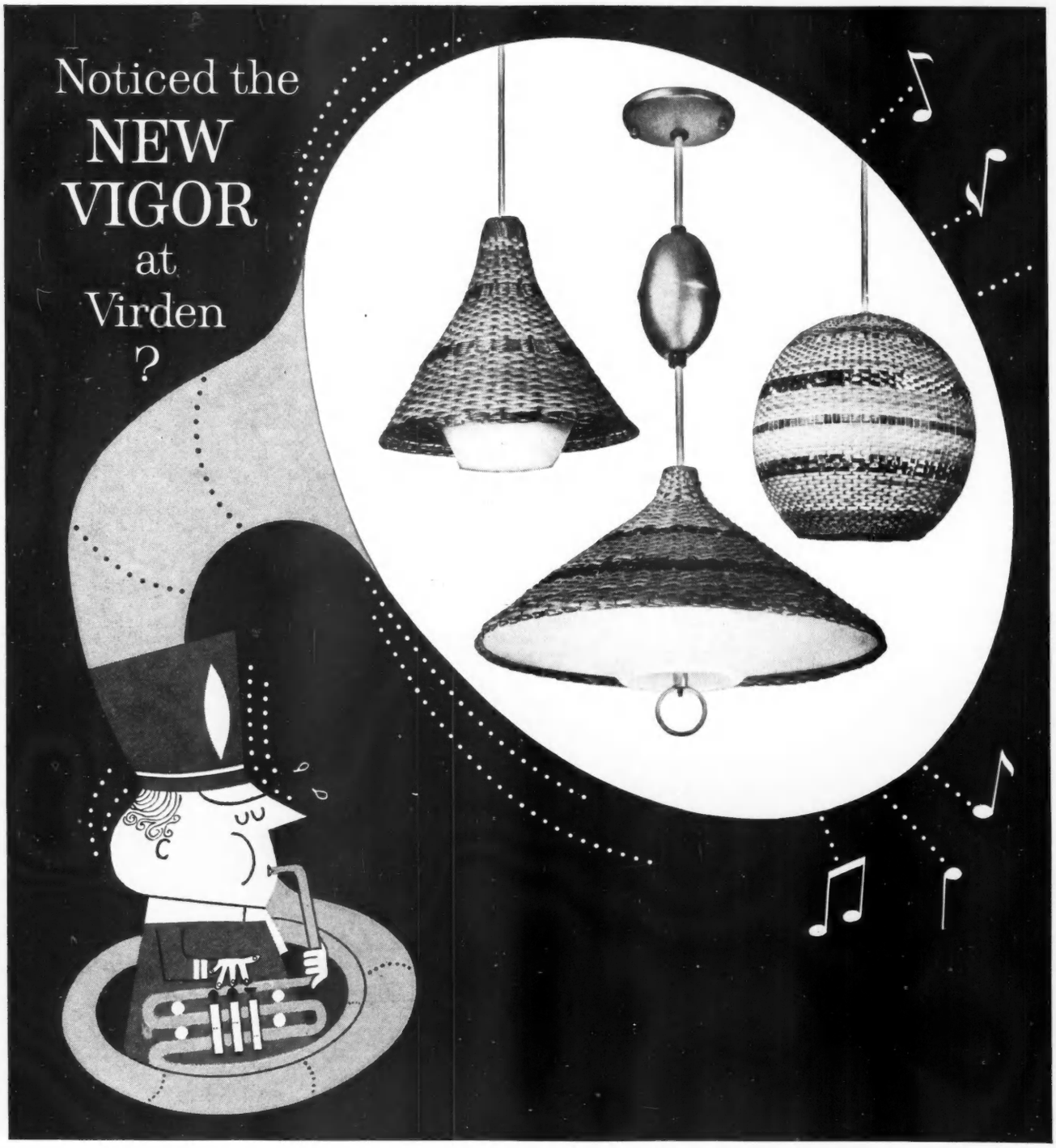
Shadowless Lighting at New Southampton School

* * *

Lighting in the Church

* * *

Lighting for Conferences



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VIRDEN Lighting

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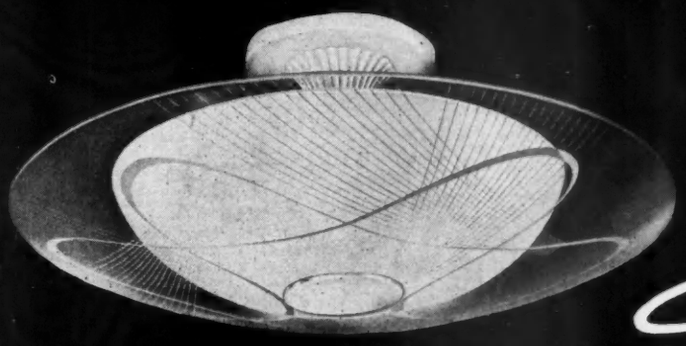

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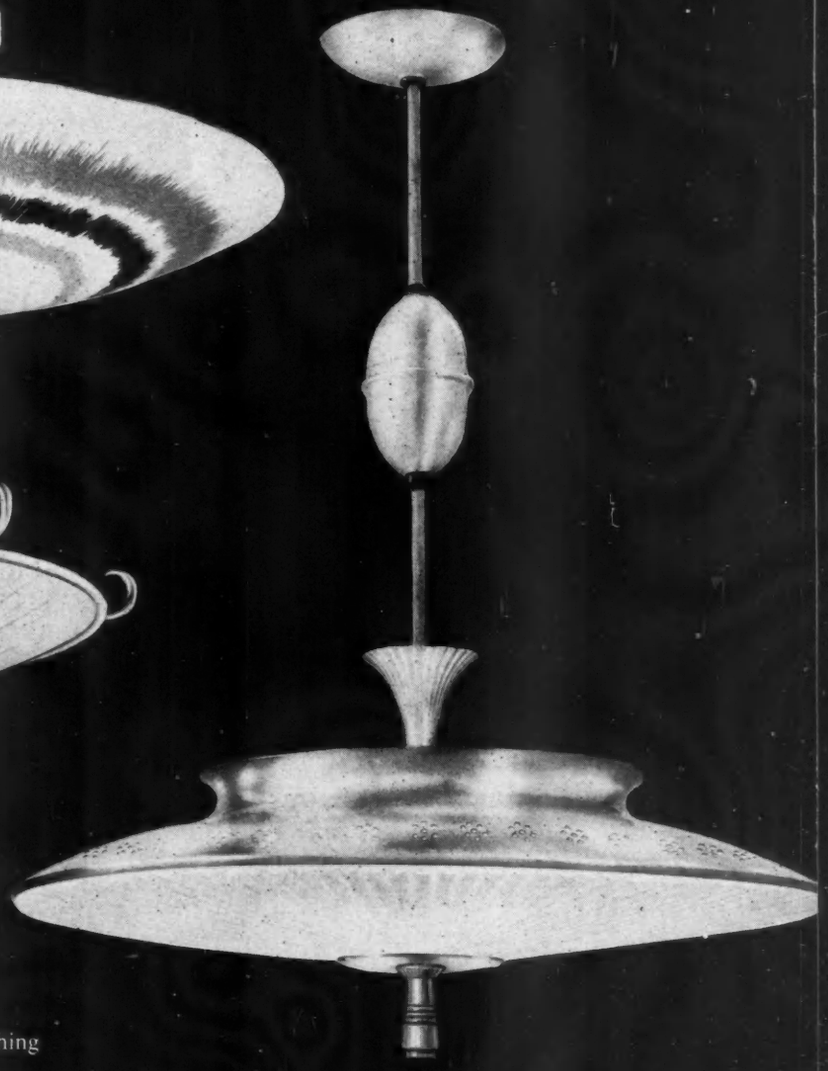

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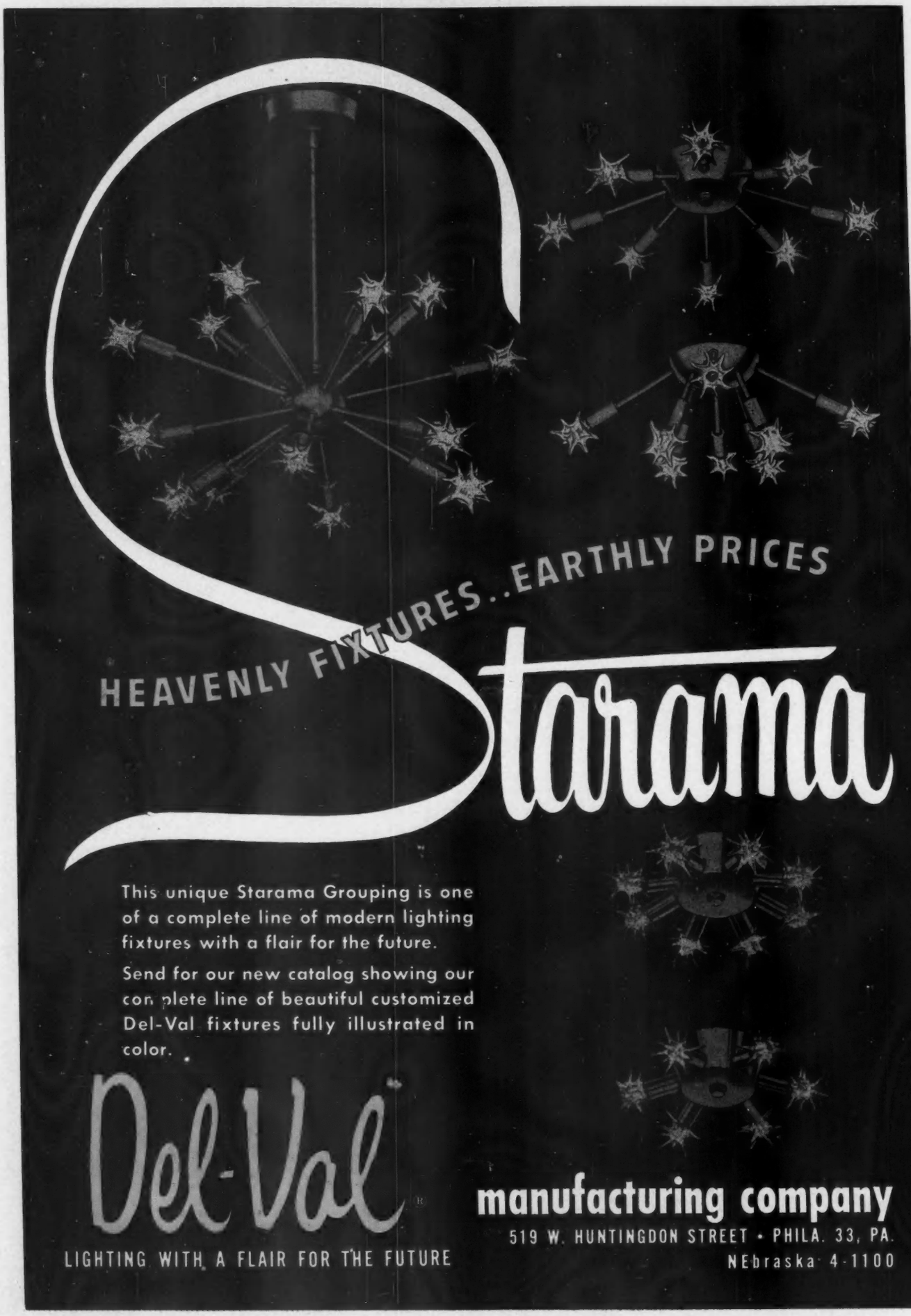
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R. E. Cleary

School Lighting Million Dollar Business

The population explosion has created ever increasing need for new school construction.

The State of California for instance must house approximately 200,000 new students on various public school grade levels each year for many years to come. This means about 300,000,000.00 Dollars worth of public school construction annually. When one adds to this the building programs of large state universities, plus private schools — the school construction dollar volume becomes an item of interest to all facets of the building industry.

Past figures indicate that the electrical portion of school building projects averages between nine to fourteen per cent of the total construction bids.

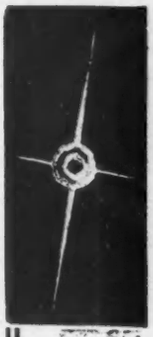
. . . A large cut of the pie goes to the lighting industry! ! ! ! We call your attention to the special school and church lighting section in this issue of LIGHTING!

Richard E. Cleary

Publisher-Editor

On Our Cover:

A typical classroom in the New Southampton School, Long Island. Number and spacing of lights was determined after first deciding on a desired desk level of 60 footcandles. There are 11 classrooms and 13 special areas in the new school. Each location is provided with lighting equipment designed for its particular function. Frederic E. Allardt, Jr. is the architect, lighting equipment by Holophane. Story on page 18.



The *LIGHTING* Industry's Exclusive Magazine

Lighting

AUGUST 1960

VOLUME 76

No. 8

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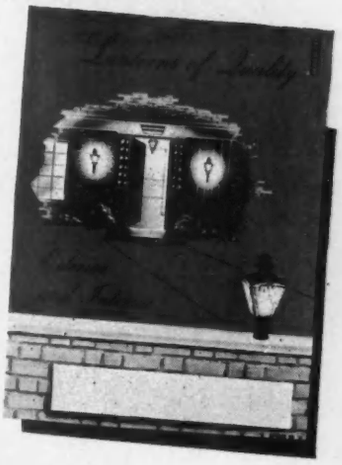

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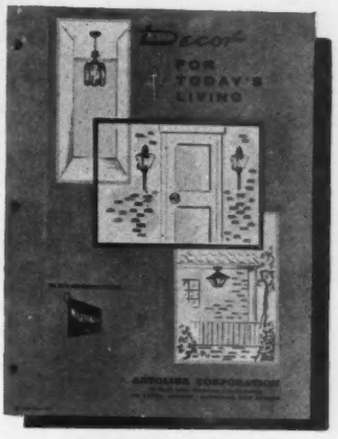

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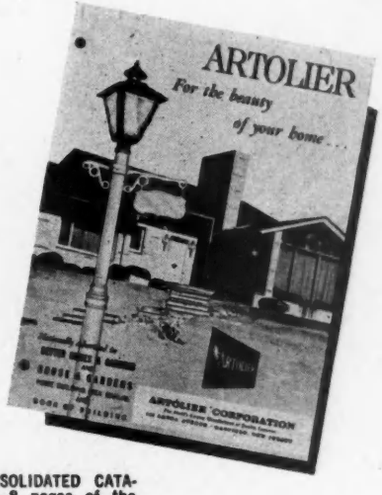

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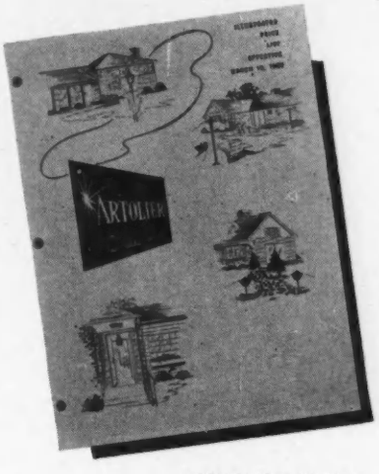

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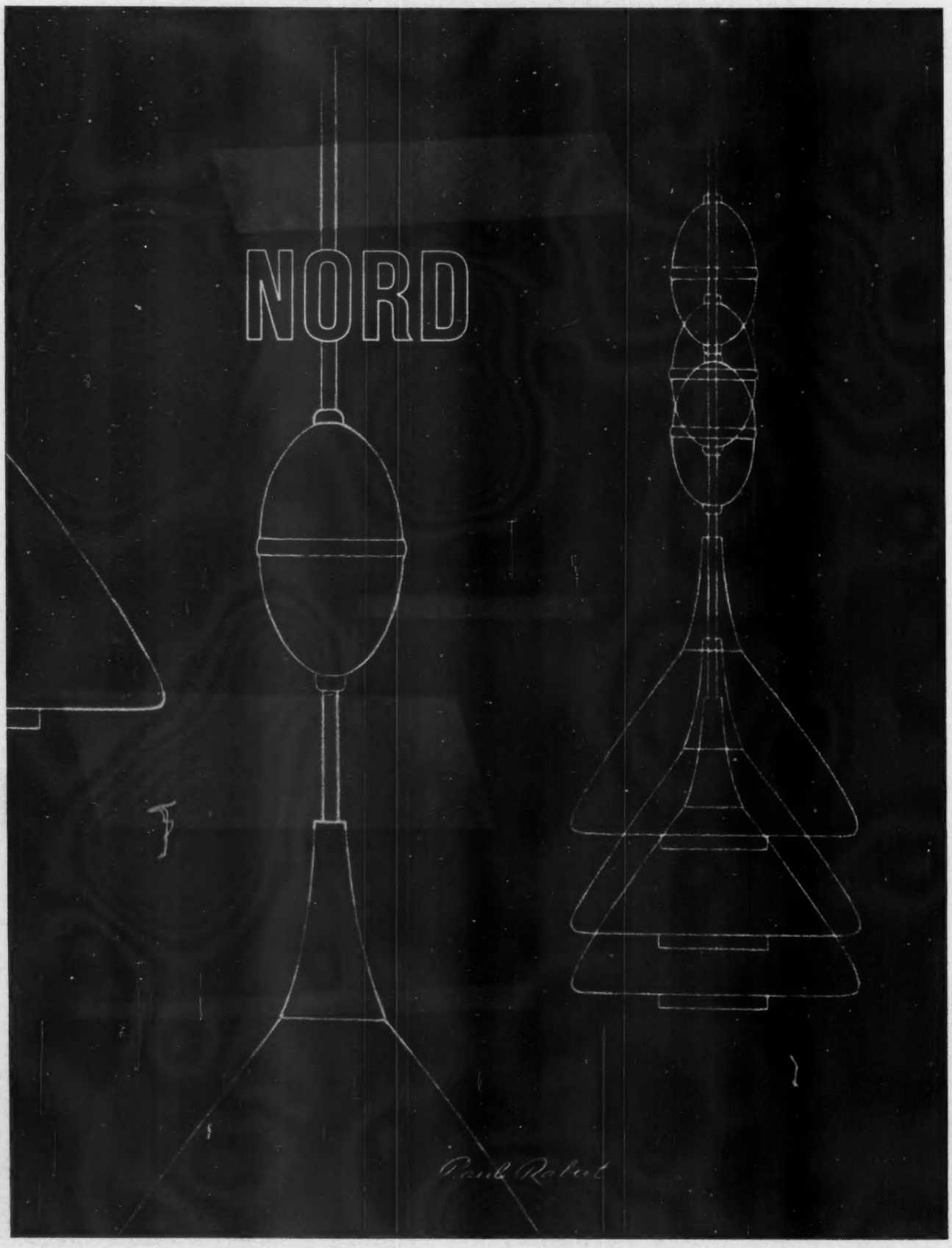

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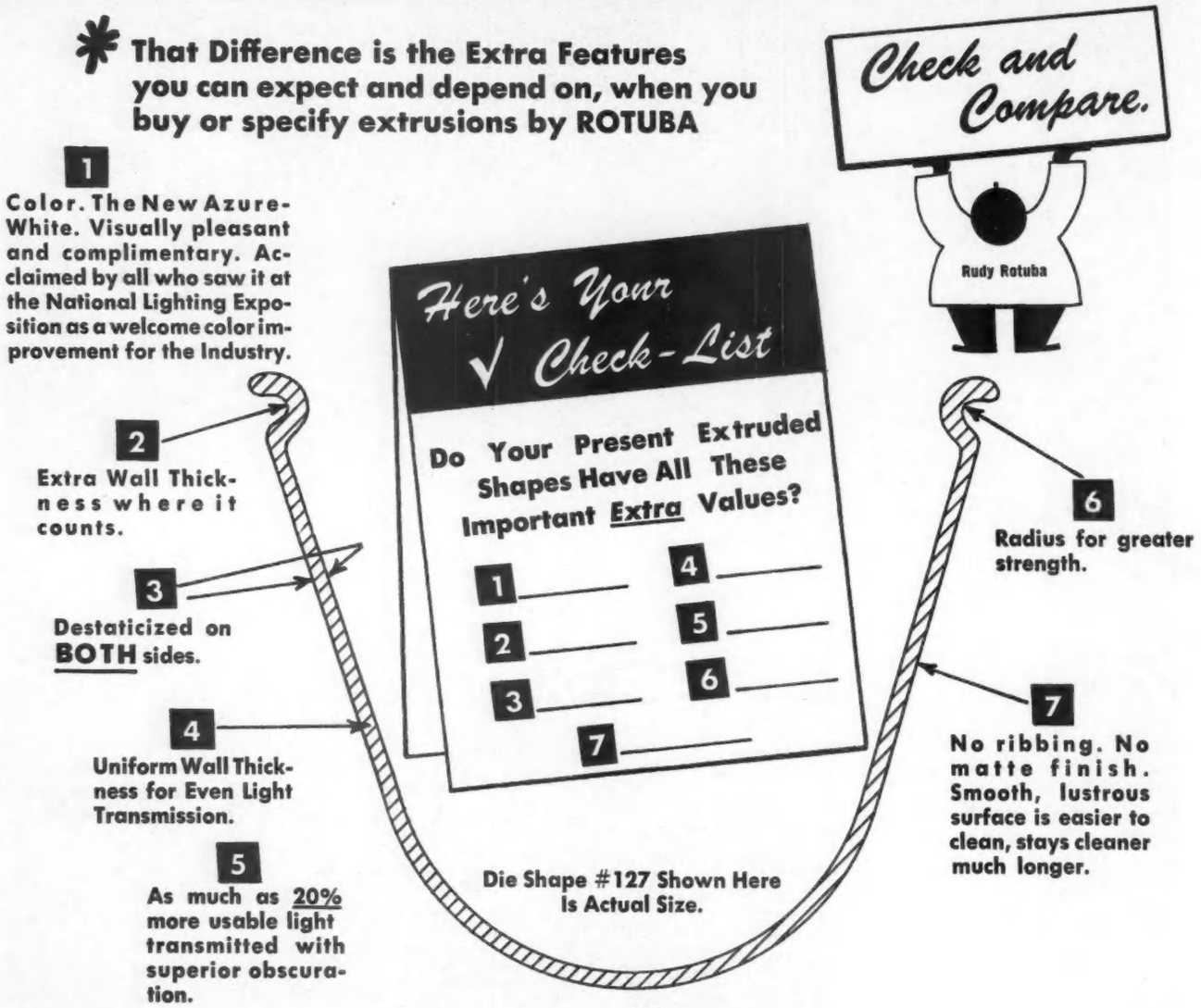
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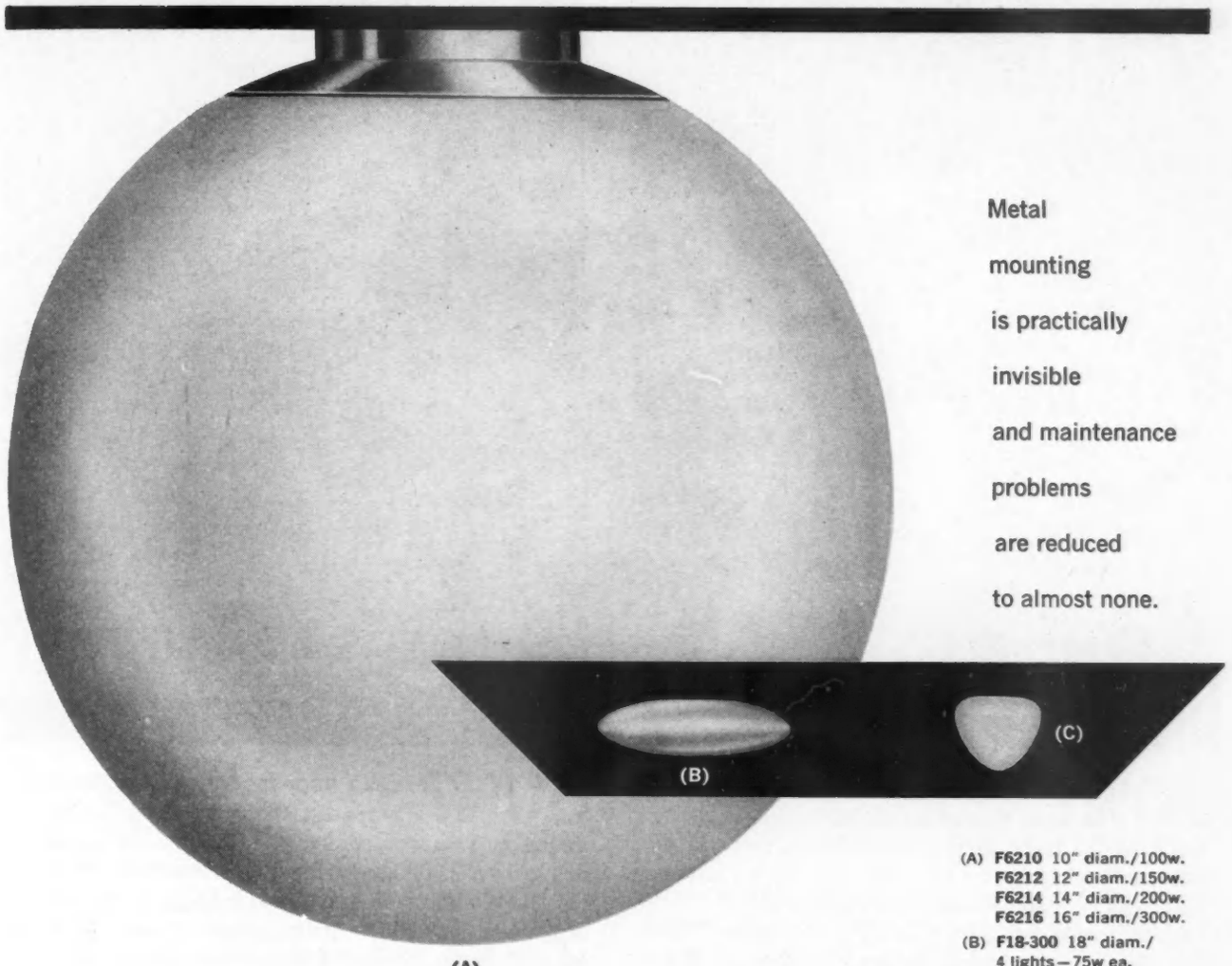


(A)

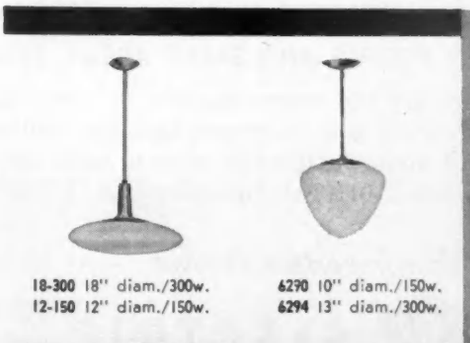
Metal mounting is practically invisible and maintenance problems are reduced to almost none.

(A) **F6210** 10" diam./100w.
F6212 12" diam./150w.
F6214 14" diam./200w.
F6216 16" diam./300w.

(B) **F18-300** 18" diam./ 4 lights—75w ea.

(C) **F6294** 13" diam./300w.

*Patent pending.



18-300 18" diam./300w.
12-150 12" diam./150w.

6290 10" diam./150w.
6294 13" diam./300w.

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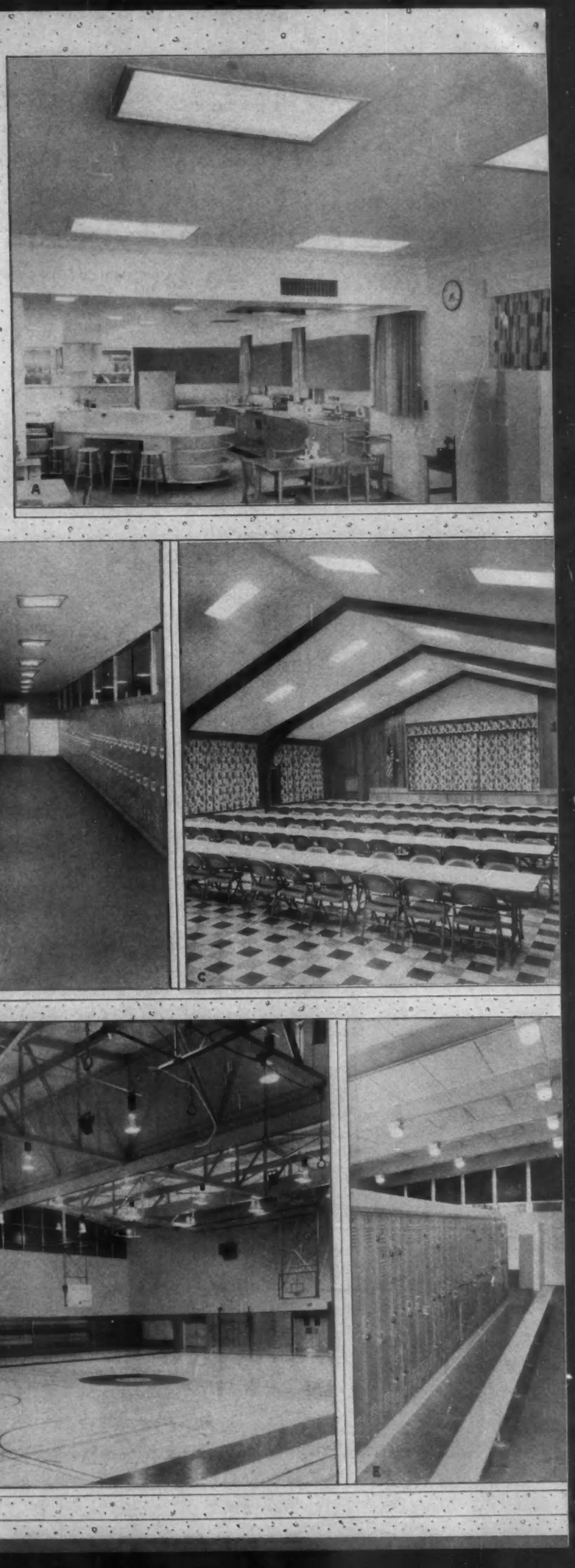

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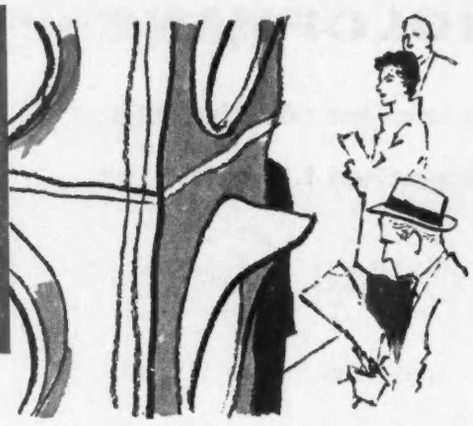

"You really can't compare the two, Jimmy! As you know so well, every good investment plan needs a sound backlog of basic safety and you need some savings before you branch out with anything else. Now, we don't know of ANY sounder, safer form of saving than U.S. Savings Bonds. We felt we were doing our people a real favor by asking our State Savings Bond Director to help us explain the Payroll Savings Plan to every person on our payroll.

"Until we put on this company-wide campaign, lots of people in our company had no idea they could set up a regular, *automatic* savings plan by just signing one card. They welcomed having someone to answer their question *in person*, and it appealed to their pride to be made a part of the company group contributing to our country's economic welfare.

"And, Jimmy, here was another thing we found out. Many of our employees didn't realize that since U.S. Savings Bonds now earn 3¾% they are the best investment they have EVER been!"

Perhaps there are employees in *your* organization who don't know what a splendid base for family savings U.S. Savings Bonds really are. Perhaps they don't realize how easy it is to start NEXT PAYDAY with regular, systematic savings for important future goals.

Your State Savings Bonds Director has a fine background of experience in presenting the Payroll Savings Plan. For fast, understanding help, get in touch with him now. Or write Savings Bonds Division, U.S. Treasury Department, Washington, D. C.

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100 FC AT 4 WATTS PER SQUARE FOOT!

the most efficient, most rugged, concave-plastic drop luminaire available

Examples — Estimated Ft. Candles — 80/50/30 R. F. — 9′ 0″ to 9′ 6″ Mtg. Ht. — 10′ 6″ to 11′ Ceil. — Row Mtgs.

with Concave PRISMOID					with Concave GRATELITES				
Rows of lamps	Room Index				Rows of lamps	Room Index			
	D	C	B	A		D	C	B	A
2-lite	52 FC	59 FC	67 FC	71 FC	2-lite	48 FC	54 FC	62 FC	66 FC
3-lite	78 FC	89 FC	101 FC	107 FC	3-lite	72 FC	81 FC	95 FC	99 FC
4-lite	99 FC	113 FC	129 FC	136 FC	4-lite	91 FC	105 FC	118 FC	125 FC

Notes: Room index D is for 30′ x 36′ room using 3-28′ rows
Room index C is for 40′ x 48′ room using 4-40′ rows
Room index B is for 50′ x 56′ room using 5-48′ rows
Room index A is for 60′ x 60′ room using 6-52′ rows

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SCHOOL–AND CHURCH LIGHTING SECTION

SCHOOL ILLUMINATION

by J. M. Chorlton

There are four areas which taken together control the visual environment in the classroom and decide whether the environment will be comfortable and assist in the educational advancement of the school child.

These four areas are:

1. *Provision of an adequate level of illumination for performance.*
2. *Control of direct glare.*
3. *Reduction in losses in visibility due to reflected glare.*
4. *Restriction of brightness within the field of view to acceptable limits.*

Gradually over the years researchers in light and vision have built up a fund of knowledge concerning visual performance. Each in turn has refined the work of the previous. We now have the results of an extensive research in visual performance and which have established now lighting levels.

Glare is bad, causes school children to make mistakes and it slows up their educational advancement. Glare causes fatigue and is a strain on the nervous system. The performance of a child in school suffers as a result of glare. Glares comes from high brightness in the field of view, either directly from light sources such as windows or lighting fixtures. It may result from reflections within the task causing a reduction in visibility.

Contrast between a task and background should be kept low. Contrast between any adjacent surfaces in the field of view should also be kept low.

If proper attention is paid to these characteristics of a lighting system and interior, a visual environment will result in increased comfort and learning efficiency of the school child.

School Lighting From Research To Application

Charles D. Gibson, Chief
Bureau of School Planning
California State Department of Education

Research is only a compilation of words, figures and diagrams. It has value only as a recording of processes, data and conclusions. To become a constructive force, it must be taken out of the laboratories—off the shelves—and be integrated successfully with the facts of life found only in the cold, calculating and competitive work-a-day world.

The Lighting Industry—both in terms of daylight and electric light—has produced new materials and techniques in many phases of its operations. The application engineer today has much new research and many new materials to work with. Will he use them? If so—how will be use them?

Most people connected directly with the lighting industry will use the new research results and newly produced materials. Some will use them only to argue against them, but they will use them.

The more important question is *HOW* will people involved in application use the new findings and materials.

In school building design there are five basic factors so inter-dependent that one cannot be planned successfully without consideration of the other four. These five factors we call spatial, thermal, visual, sonic and aesthetic.

First, the spatial factor represents the basic space we are designing. It has often been pointed out in discussions of heating, ventilating, lighting, and acoustically treating school buildings, that it is "penny-wise and pound foolish" to make a substantial investment in land, structure and enclosure, and then attempt to save money by installing cheap and inadequate facilities to condition that space for the efficiency, comfort, and delight of the occupants. It is equally, if not more, to the point to reverse the emphasis and indicate the gross waste involved in providing good quality-level heating, ventilating, and lighting equipment in spaces that are improperly sized and arranged for educational services.

The thermal environment must be considered as an inter-related factor with the spatial, visual, sonic and aesthetic. Thermal environment emphasis has changed from heating to air conditioning in school design. The implications to total design are most apparent.

The sonic factor, of course, relates to both the control of unwanted sound and the projection of wanted sound. This design feature of necessity must be a part of any comprehensive consideration of the spatial, thermal, visual and aesthetic factors.

The aesthetic factor consists, in reality, of the sum total of all other factors. It is the most difficult to define and yet, in many instances, the most readily apparent of any of the factors.

The visual factor, in school building design, then, must be planned simultaneously as a separate yet integrated environmental factor. There is no way to divorce it from its relationships with other design factors.

Brightness Balance

After relatively low levels of illumination have been attained, Brightness-Balance becomes the dominant factor in the design of a good visual environment in schools. Brightness-balance may be achieved by lighting systems that meet the following objectives:

A. In a classroom, the brightness of any surface viewed from any normal standing or sitting position should not be excessively greater than the brightness of the visual task. As the high brightness of surfaces in the visual field approaches the brightness of the task, visual comfort and efficiency increase. Present research indicates that the highest acceptable brightness of any surface in the visual field should not be greater than ten times the brightness of the task.

B. In a classroom, the brightness of any surface viewed from any normal standing or sitting position should not be excessively lower than the brightness of the visual task. As the low brightness of surfaces in the visual field approaches the brightness of the task, visual comfort and efficiency increase. Present research indicates that the lowest acceptable brightness of any surface in the visual field should not be less than one-third the brightness of the task.

C. The brightness of surfaces immediately adjacent to the visual task is more critical in terms of visual comfort and efficiency than that of more remote surfaces in the visual field. These adjacent surfaces have lower acceptable brightness limits than surfaces farther removed from the task. Present research indicates that surfaces immediately adjacent to the visual task should not exceed the brightness of the task.

D. The brightness-difference between adjacent surfaces in the total visual field should be reduced to an acceptable minimum.

E. The characteristics of any lighting system should be such that direct and reflected glare are not objectionable. If the brightness-differences produced by a lighting system are held within the limits stated in Goals A, B and C, direct and reflected glare will not be objectionable.

F. Daylight and electric light systems should conform to the same brightness and brightness-difference goals, and both systems should be coordinated in design to assure the effective contribution of both.

G. Any lighting system should be designed in such a manner that it will contribute to a cheerful, friendly, and aesthetically pleasing classroom environment.

The brightness goals stated above assume an illumination level of 35 foot candles on the reference task. As illumination levels are increased substantially above the 35 foot candle level of these goals, surfaces of high brightness should more nearly approach the brightness of the task.

Because of the wide variety of visual tasks in school rooms, it is obvious that all tasks could not be selected as the reference task for the purposes of evaluating a lighting system. For design and evaluation purposes, a single reference task has been established arbitrarily as a horizontal, working surface with a 70 per cent reflection factor located at the point of lowest light level in the normal classroom area.

Task Determines Needed Light

The nature of the task determines the kind and amount of light needed to view it with comfort and efficiency.

We always have known the general truth of that principle, but not until the past few years have we had any reliable specific verification of it. Research now has given us pin-pointed data concerning the lighting requirements for many specific tasks. We believe that this data should be used as much to improve the nature of the task in many instances, as it is used to recommend higher lighting levels. If, for example, it requires 63 foot candles of high quality lighting to attain 99 per cent efficiency viewing a sample of handwriting with number two pencil, and only 1.36 foot candles of the same kind of light to attain the same visual efficiency viewing a sample of ink writing why shouldn't we begin our campaign for better lighting by recommending the use of pens rather than pencils?

Recent research has established the fact that the *degree of contrast* involved in a seeing task largely governs the degree of difficulty the eye encounters in seeing it. The less contrast, the more difficulty. We now have the *specifics* about this visual factor. Incidentally, in comparison with contrast, the *size* of the object has proven to be less significant than lighting engineers previously had thought.

The level of lighting—or number of foot candles—is one of the factors affecting visual acuity, and the type of lighting system producing the light controls to a large degree the number of foot candles required for the efficient seeing of a given task.

From the customer's point of view, the lighting industry's basic application so far has been a single-track, all-out campaign for more foot candles. All of you selling in the lighting field have heard the big

—Continued on page 39

Shadowless, Glareless Lighting At New Southampton School

ONE of the services to receive more than the customary consideration of "adequacy-at-least-cost" at the new high school in Southampton, Long Island, is the lighting system. In fact, to learn the details of what goes into a good lighting system and to fully comprehend the reasons for the various selections made by the school architect, Mr. Frederick E. Allardt, Jr., of Southampton, the School Board went into a six hour skull session with a professional engineer from the major lighting equipment manufacturer, Holophane Company, Inc., New York, N. Y.

As a result of the understanding gained, the recommended high-quality system was adopted and the new school has shadowless, glareless lighting of just the right intensity throughout—from classrooms to gym to auditorium to locker rooms to boiler room, et al.

The following article outlines some of the things learned by the Southampton School Board, and includes information which should be of interest and value to others engaged in school construction or modernization.

Lighting For Particular Functions

To begin with, the school has 24 teaching stations—11 classrooms and 13 special areas. Each location is provided with lighting equipment designed for its particular function. For example, to take what are perhaps the most important rooms first, the classrooms, all are equipped with 2' x 4' recessed fluorescent fixtures having Holophane acrylic plastic lenses (Fig. 1). These lenses are in the form of sheets having hundreds of small prismatic cones molded in their outer surface. These cones receive light from the fluorescent lamps above and direct it into the space to be lighted below. The light is directed into a multitude of over-lapping conical patterns which, for practical purposes, create shadowless illumination. Any object normally used in a school would block only the light from a given group of cones, and light from adjoining cones would pass beside the object at an angle and illuminate the space beneath it.

The lens prisms also control the light so that virtually none is directed outside a 120° conical angle. This factor eliminates glare, which is largely caused by light outside the 120° cone range.

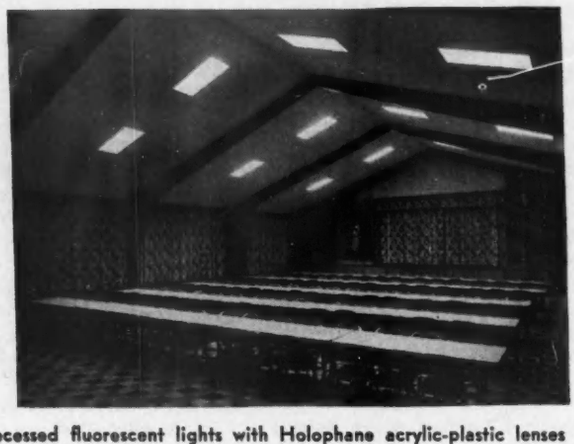
The lenses are each two feet square, two being used at each fixture. They are fabricated in the shape of a wide, inverted "V" with molded-in structural fins at all four edges and across the center in both directions. The structural members also have prismatically molded surfaces for proper light control.

60 Footcandles at Desk Level

The number and spacing of the lights was determined after first deciding on a desired illumination at desk level of 60 footcandles, as recommended by current standard of proper illumination. Until relatively recently, the accepted standard was considerably lower, with the result that many schools are today lighted badly by current standards.

Knowing the level of illumination desired, room dimensions, and room coloring (white), engineering formulas were employed to determine the overall lamp output required. Then, based on the rating of standard-size units, the number of lamps was determined. The spacing and arrangement of the lights were selected by the architect on the basis of the distribution effects of the Holophane lenses, and upon aesthetic and utilitarian considerations.

Auditorium



Recessed fluorescent lights with Holophane acrylic-plastic lenses are also used to illuminate the auditorium. Lenses have hundreds of prismatic cones molded in their outer surfaces to provide multiple overlapping cones of light that produce uniform illumination.

In the auditorium (Fig. 2), the same type of lighting is employed. Here horizontal stem-mounted fixtures might have been used, since the ceiling is of the sloped cathedral type. However, for aesthetic reasons the more pleasing recessed construction was retained. The illumination level in this room is 50 footcandles, less than in the classrooms since auditorium usage is less strenuous on the eyes.

Gym

Mercury lamps in metal-covered prismatic glass reflectors provide shadow-free illumination in the gym. Twin Holophane units provide extra light near the baskets and independent incandescent lamps on separate circuits provide light for "walk-through" purposes when the gym is not in use.

In the gym (Fig. 3), 400-watt mercury vapor lamps are used. This type of lamp has a higher output per watt than other types and has an extremely long life—from 10,000 to

12,000 hours. The parabolic-shaped Holophane glass reflectors have smooth inner surfaces that preclude dust accumulations. The outer surfaces have prismatic corrugations running from top to bottom to properly reflect upwardly directed light down into the gym. Reflectors have metal covers which, in addition to blocking upward distribution of light, prevent dust from getting on the outside of the prismatic surfaces. The prismatic construction focuses virtually the entire light output into a 120° cone, and the reflector extends well below the mercury lamp so that light output is comfortably contained within the 120° cone.

Twin lamps are employed adjacent to tournament basketball hoops, to provide extra illumination at these locations. The illumination level in these areas is 60 footcandles, whereas at the spectator stands (folded away in Fig. 3) it is 35, which is ample for the purpose.

Interspersed among the mercury lamps, are a number of 500-watt incandescent "walk through" lamps for lighting the gym whenever full illumination for sporting activities is not required—momentary entry, passing through, etc. This is to avoid the brief delay encountered before mercury lights go on after pushing the switch. All gym lights have wire guards across the buttom to prevent damage from sports equipment.

Locker Rooms

In lighting the locker rooms, corridor-type incandescent fixtures are used, inasmuch as the spaces to be lighted are between rows of lockers and are essentially aisles. The fixtures here are bowl type units mounted on ceiling. In this instance, since the light is normally viewed when walking along the aisle, light is directed along the aisle in one pattern, and across it in another. The refractor thus establishes a light distribution pattern that avoid glare and takes full advantage of reflectance from locker and wall surfaces to achieve a harmonious balance. Inexpensive 150 watt incandescent lamps are used as the light sources, and the illumination level is only 12 foot candles, these being sufficient for this application.

Locker Corridor

Recessed incandescent units light locker-hall. These units have both a reflector (built into the ceiling) and lens (flush with the ceiling) to direct the light in an optimum distribution pattern.

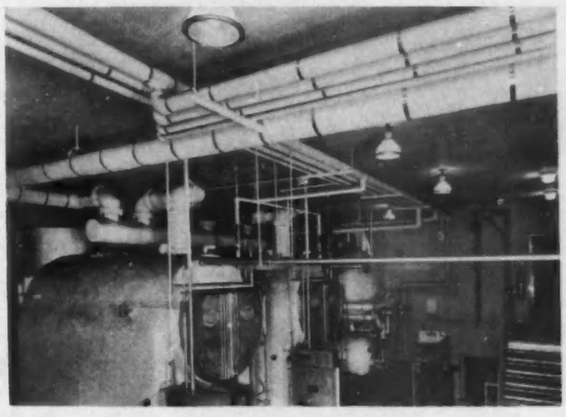
Recessed incandescent lights are used to illuminate an entry corridor having lockers along one side and a window wall on the other (Fig. 4). The units have internal parabolic-shaped reflectors with redirect upward light to prismatic lenses flush with the ceiling. These lenses then reflect or bend to light and distribute it in a glare-free pattern.

In selecting lighting equipment, there is often a certain amount of personal preference involved. In this case, the recessed units were chosen over the bowl-type locker-room lights, largely because of the greater attractiveness of the recessed unit. However, the width of the hall and the fact that the partially glass walls would not reflect light as counted on with the locker-room type units, were practical reasons for not using these units at this location.

Kitchen

The kitchen is lighted with fluorescent lamps contained in 4'-long "U"-shaped prismatic acrylic enclosures. Emitted light is refracted through the lower and side surfaces, with the major portion directed downward and an indirect component directed upward to illuminate the ceiling. Light rays are bent into useful zones and away from the direct-viewing (glare) zone.

Boiler Room



High-ceiling incandescent lights similar to the gym walk-through lights are used in the boiler room. These fixtures, however, do not have metal covers and allow light to pass directly upward into the upper portion of the room. Lights above stairway are designed especially for corridor lighting and direct light along walkway in one pattern and across it in another.

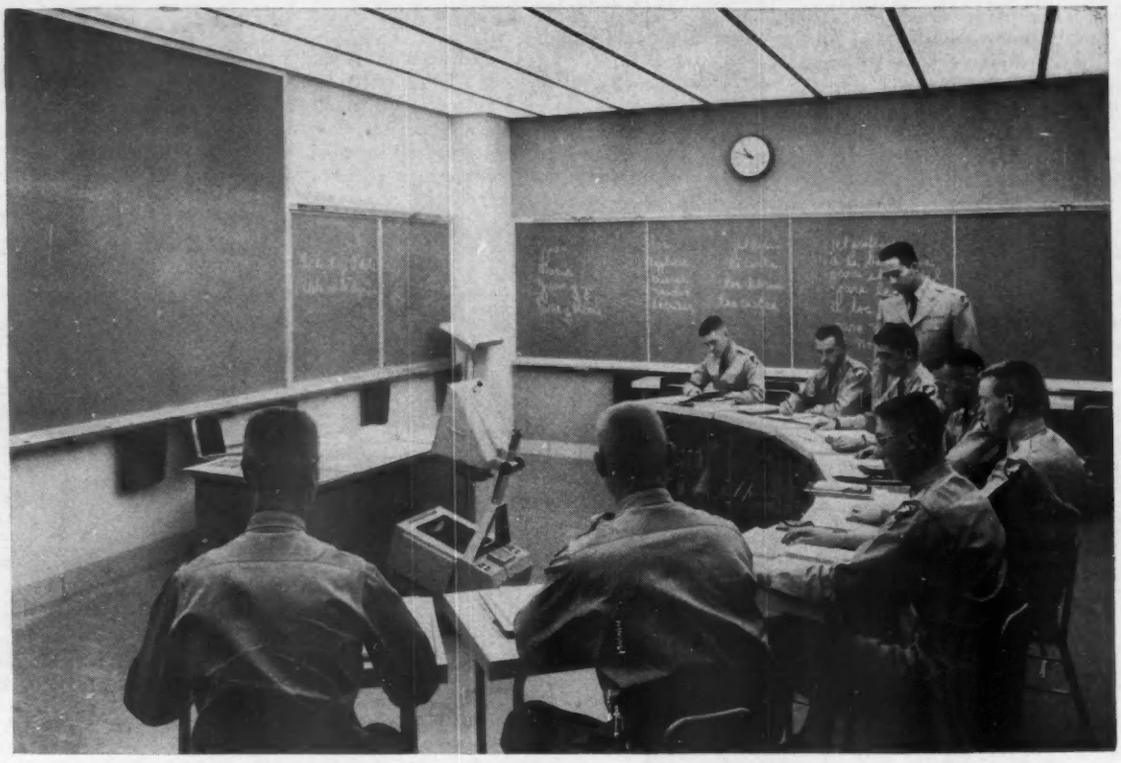
The boiler room (Fig. 5) is lighted by the same type units as are used for "walk-through" lighting in the gym. However, the reflectors do not have metal covers, since it is desirable to illuminate the upper as well as the lower portion of the room. The stairway and entry corridor are lighted with the same type units used in the locker rooms.

Home Economics Room

Home economics room has recessed fluorescent lights in sewing and study section and recessed incandescent lights in cooking area. Incandescents illuminate individual work centers to best advantage in this instance.

A portion of the home economics room (Fig. 6)—the sewing and study section—is lighted with recessed fluorescent equipment as used in the classrooms. However, the cooking section is illuminated with recessed incandescent units. A lower ceiling, truer color rendition with incandescent lighting, and need to concentrate light in certain locations rather than overall illumination uniformity, are principal reasons for the second lighting system in this section.

Maintenance & Installation on page 32



Typical classroom in Thayer Hall, West Point. High-level lighting that is free from glare and evenly distributed is furnished by luminous ceilings. Photo Sigurd Fischer.

The New Lighting At West Point

THE new lighting in Thayer Hall, at the United States Military Academy, is seen here in the views of typical installations in various areas. As told in the March issue of LIGHTING, the former riding hall, which had been abandoned ever since instruction in horsemanship was dropped from the curriculum, has been converted into a great academic center. The Army Corps of Engineers were in charge of the project and Gehron & Seltzer, of New York, were the architects.

The building, which is as long as a city block and four stories in height, contains one hundred classrooms, occupying the third and fourth floors, and an equivalent area on the first and second floors, which is occupied by instructors' offices, conference rooms, etc.

The facilities afforded by this conversion include two auditoria, one of which is shown in a photograph herewith. It will be seen that this area has down lighting from recessed incandescent units in the ceiling in combination with upward lighting from pendant fixtures, to

light the ceiling and to furnish diffused indirect lighting. Each of these pendant fixtures contains a cluster of incandescent lamps. There are also bracket units that provide upward lighting. In the perimeter of the auditoria there is a combination of incandescent and fluorescent lighting.

The pendant fixtures and other special fixtures were designed by the architects in collaboration with Guy B. Panero, the consulting mechanical engineer, and were made by the H. & L. Manufacturing Co., New York. The down lights and other standard units were furnished by Globe Lighting Products, Inc., Brooklyn, N. Y.

The classrooms, map rooms, "writ" rooms, laboratories, offices and conference rooms are provided with high-level diffused general illumination from luminous ceilings using fluorescent lamps above diffusing panels of translucent plastic material. These ceilings were manufactured by Luminous Ceilings, Inc., Chicago. The B. & B. Electric Co. was the electrical contractor. Grove, Shepard, Wilson & Kruge were the general contractors. Bolt, Baranek and Newman, of Boston, were the acoustical engineers.

The sculptured eagles over the principal entrances to the building tie it in with the past for they are by the noted sculptor, Lee Lawrie, whose sculpture is a feature of the Academy buildings.

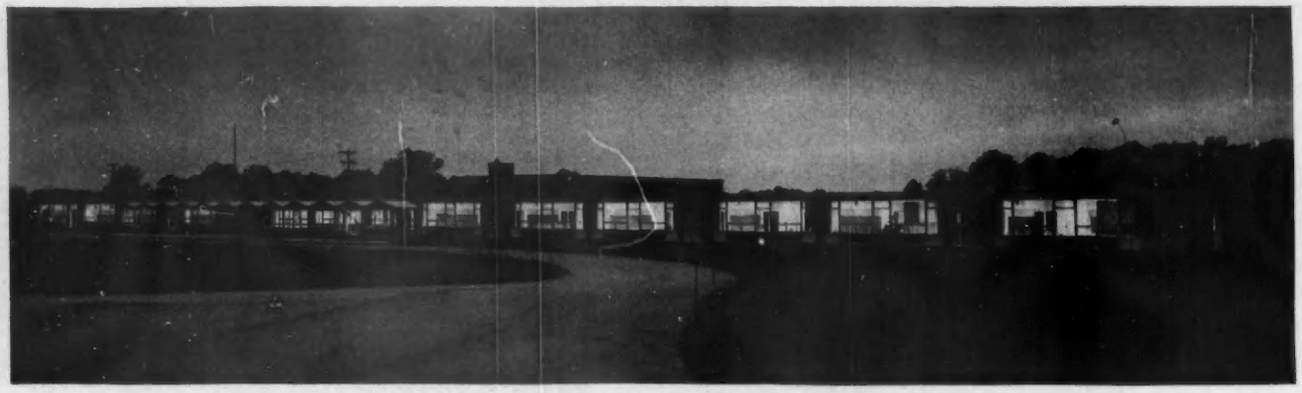
The renovation of the massive granite wall was carried out by Brisk Waterproofing Co., of New York.

The lobby has simple dignity that is relieved by a shallow dome with a symbolic design in its center. Photo Sigurd Fischer.

There are two auditoria in Thayer Hall at the U. S. Military Academy, one seating 1500 and the other 800. As seen in this view upward lighting, as well as down light is provided, including decorative pendant fixtures and bracket fixtures as well as built-in units. Gehron & Seltzer, architects, New York.

Credits

Architect: **Gehron & Seltzer, N. Y.**
Consulting Mechanical Engineer: Guy B. Panero
Contractors: **Grove, Shepard, Wilson & Kruge**
Electrical Contractor: B & B Electric Co.
Acoustical Engineers: Bolt, Baranek Newman, Boston
Wall Renovation: Brisk Waterproofing Co., N. Y.
Sculpture: **Lee Lawrie**
Lighting: **Pendant & other special fixtures designed by architect and made by H & L Mfg. Co., N. Y.**
Downlights & other standard units: Globe Lighting, Prod., Brooklyn, N. Y.
Luminous Ceilings by: Luminous Ceilings, Inc., Chicago



The Elizabeth Wilcox Elementary School at North Ridgeville, Ohio is especially attractive because of its modern low-contour construction. Fine lighting sets the building aglow! Architects: Charles L. Barber & Assoc., Toledo, Ohio.

Lighting and New School Design

THE physical needs of new school construction to provide an environment conducive to learnings are faced daily by architects and engineers in every section of the country.

The Elizabeth Wilcox Elementary School at North Ridgeville, Ohio, is attracting school and design people responsible for new school construction because it has met these requirements economically.

The building is bold, yet simple, in design. The exterior combines wide expanses of glass, steel, and masonry. Steel decks and canopies provide protection against weather and direct sun glare.

One of the unusual features is that there are no inside corridors. There are exterior doors in every classroom, thus virtually eliminating the serious fire hazards of earlier school design. Forty classrooms are separated by partial acoustical partitions with wide access openings between rooms, maintaining, to a degree, privacy and noise control for each classroom.

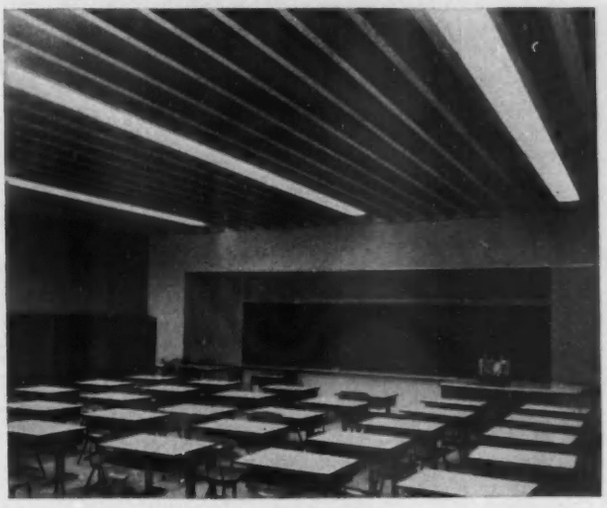
The architects, Charles L. Barber and Associates of Toledo, Ohio, matched the aesthetic unit of the low contour of the building exterior with an H. H. Robertson cellular steel deck ceiling system. This system offers sections capable of spanning classroom widths in depths from 4½" to 6", and in gauges sufficient to withstand the load from the roof.

Louvered Wakefield lighting units were inserted into the cells between the vertical webs of the ceiling. They create a soothing, simple pattern and provide light levels needed for study without glare. In the classroom areas there are fifty 24′ rows of 8′ slimline units and eight 20′ rows of rapid start 4′ units with 45° x 45° shielding. The lobby area is illuminated by Wakefield surface mounted Omegas in various sizes to compliment the design.

Graybar Electric Company, Cleveland, was the electrical distributor and Dunfee Electric Company, Lorain, the electrical contractor.

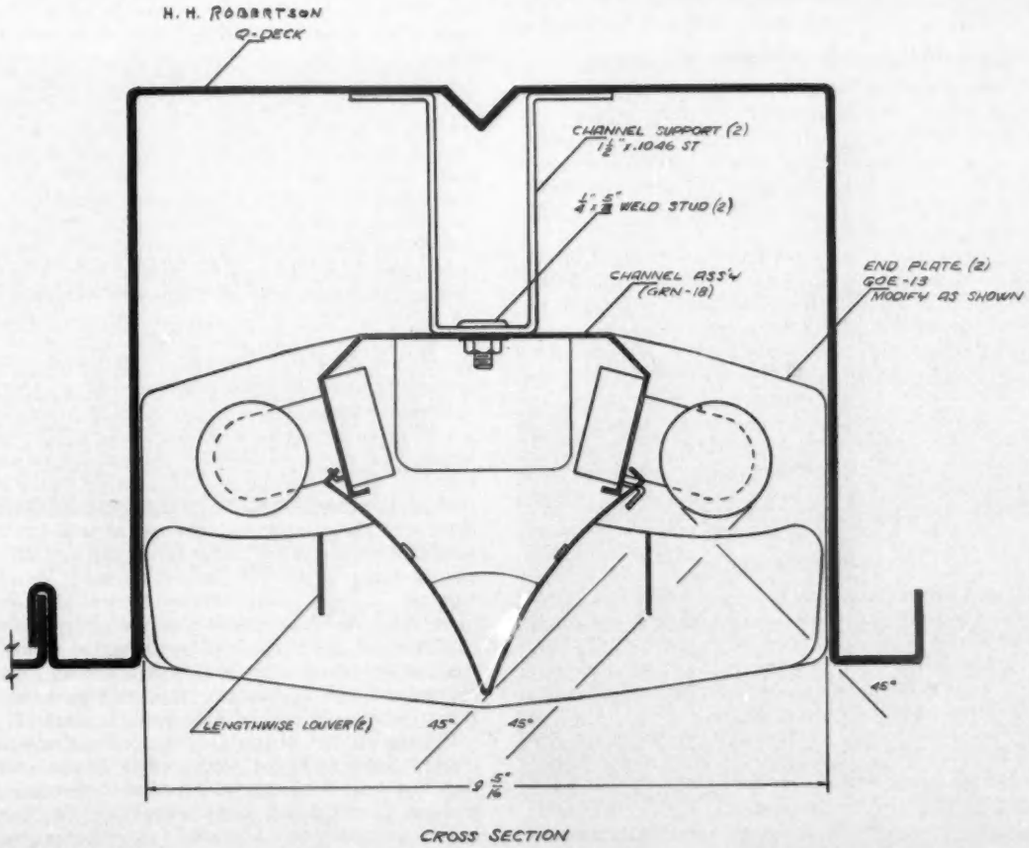
More illustrations on next page

Right: Typical classroom at Elizabeth Wilcox Elementary School. —Lighting units by Wakefield were inserted into vertical webs of ceiling.



Front entrance and lobby of the school. Modern design and modern lighting combined to create beauty and utility.

Front entrance seen from another angle.



CROSS SECTION

The Role of Lighting In The Church

By Sherman L. Klein

The past two decades have witnessed an evolution in ecclesiastical design as the church architect strives for new expressions of architectural form to capture the spirit of a growing America.

THE blending of Traditional and Contemporary, Ancient and Modern, is a reflection of the generation and an expression of the vitality of the living faith of today". Striving for an "American style" of architecture has created many changes in church design which vary from subdued Contemporary to extreme Modernism. The functional use of the church edifice embraces not only worship services but in today's community living, it is also the center of religious education, social functions, communal meetings, etc.

LIGHTING plays a major role in this development through its service to these various functions.

Gone are the caverns of gloom, the dark nave and dim sanctuary of yesterday. Introduced into the church of today are new and vibrant elements of lighting that help create a worshipful atmosphere. The beauty of the House of Worship can best be visualized through proper lighting designed to fulfill the requirements of ample light for seeing and visual comfort.

The lighting in the church, both natural and artificial, must be integrated with the building design and therefore must be carefully planned during the early designing stage. Light Sources designed to serve, rather than dominate, accentuate rather than distract, should be carefully planned by specialists experienced and trained in this field. Light for seeing, light for mood and atmosphere, Light for expression and emphasis, are all factors to be considered. Providing enough light without distraction and with appropriate direction and diffusion is the basic function of any lighting system.

Many Tools Available

Many new tools are at the disposal of the lighting specialist to help accomplish the desired results. New high wattage reflector lamps for floodlighting and spotlighting, diffusing materials to soften the light, special color effects, reflecting surfaces all can be utilized to create a warm comfortable tone. An understanding of the performance of these elements can be invaluable in the selection of a lighting system.

In the nave area, higher illumination levels are required on the horizontal plane at the pews for comfortable reading. Softer levels of illumination on the vertical and ceiling planes are required to accent the interior architectural features.

IES recommended practice today calls for 15 foot candles at pew level in the nave and from 40 to 50 foot candles in the chancel and altar areas. Higher intensities of illumination are used in other areas where specific focal points are created. While the quantity of light required must be achieved, the quality of light must also be carefully considered. Softness and diffusion of illumination should be at levels to create the proper psychological atmosphere conducive to meditation and reverence.

Flexible System

As lighting levels continue to advance every few years, consideration must also be given to the lighting fixture or lighting system selected in that it should be flexible enough to accommodate higher wattage lamps in the same housing and still be within approved Underwriters Laboratory code of acceptance. Lighting levels in these areas will undoubtedly increase within the next 5 to 10 years and it is not beyond the realm of possibility that 20 to 25 foot candles will be desirable in the church. Lighting engineers are talking today in terms of 200 to 500 foot candles in the office, factory, school and similar areas. As lighting standards increase every few years, they do so for all visual requirements.

In both re-lighting and in new church installations, wire capacities should be sufficient size to accommodate the higher wattage lamps which may be required in the future. Lamp housings and fixtures should be of sufficient size so that when required, additional levels of illumination can be provided with the use of larger lamps. Consideration towards this end will avoid an obsolete lighting installation in the years to come. It is interesting to note that the average life of a church lighting installation is from 20 to 30 years. These factors must therefore be considered.

Design Concept

Of equal importance to the quantity of light, is the design concept of the lighting system. Lighting fixtures, manufactured expressly for ecclesiastical use should complement and harmonize with the architectural detail of the church interior. The use of properly designed luminaires can add immeasurable beauty, warmth and attractiveness to the overall appearance of the interior. With proper selection, lighting equipment can be expressly, yet unobtrusively, related to the church interior. Size, proportion, color of finish, decorative treatment, are important considerations that must be studied to make the lighting equipment blend and become an integral part of the total interior. Many different systems of illuminating a church can be used to accomplish the lighting levels required. Pendant lanterns, the most widely used type of church lighting equipment, are generally suspended over the center of the pews to provide ample illumination in this area where light for reading is needed. A wide range of lantern styles is available and several of the accompanying photographs illustrate but a few of those being used today.

Cove lighting along the side walls of a church interior can add an element of drama to supplement other lighting sources. Either incandescent or fluorescent cove lighting, if properly used, can perform supplementary lighting effects to high-light architectural details. Caution must be used with cove lighting because the accumulation of dirt on such a system can quickly reduce the effectiveness of this type of lighting.

It is recommended that the wiring be on at least two circuits, so that the main source of downward illumination can be turned off during a sermon or during ceremonies when a higher intensity of illumination over the pews is not required. A dimmer system could also be considered to help create the flexibility which is so desirable in the church lighting system.

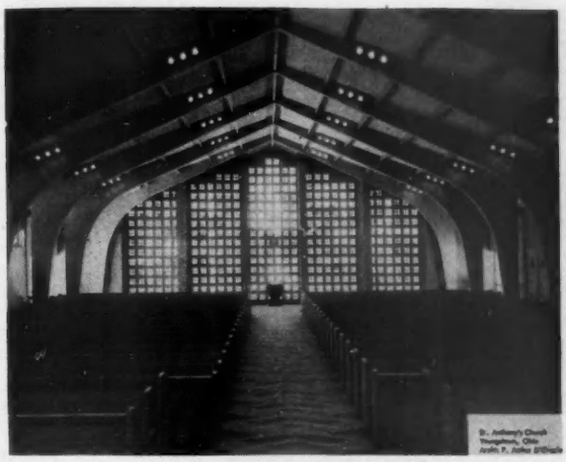
Under certain circumstances, recessed lighting can be used as a sole source of illumination for the nave. This might work out satisfactorily in those churches which have lower ceilings, however the chief objection to this type of lighting system is the darkened ceiling area which results. Some correction to this objection can be made with the use of wall brackets with floodlamps directed upward towards the ceiling. Consideration must also be given to the problems of efficiency, maintenance and relamping. In most cases, recessed fixtures are equipped with one light which restricts versatility in the system unless a dimmer is employed. If the lamp should burn out at a time when replacement is not possible, the entire area beneath this one particular fixture would be in darkness (this problem is eliminated with the lantern which is equipped with multiple lamps).

Because of the physical limitations of recessed lighting, increased wattages in the future might be extremely difficult and therefore limit the extended function of this type of system. The problem of relamping and maintenance can become a serious one if not adequately provided for in the original planning. If

relamped from below, special ladders or scaffolding equipment will be needed. If relamped from above, provision must be made in the attic area for convenient access to the fixtures.

Special Housings

For the church desiring concealed lighting sources where structural limitations make recessed lighting impractical, special triangular housings mounted behind each beam equipped with 150PAR lamps can be used satisfactorily. This unique type of installation is illustrated in the two photographs of St. Anthony's Church. One photograph is a view from the front to the rear showing the location of the fixtures, the other view from the rear towards the front illustrates how the light source is completely out of sight. Special applications of this type, if carefully planned, can perform an outstanding lighting function. This type of installation utilizes new light sources in providing for a 2000 hour lamp life thereby reducing maintenance considerably for both cleaning and relamping.



St. Anthony's Church, Youngstown, Ohio, view from front to rear shows location of fixtures.

View towards altar of same church illustrates how light sources are completely out of sight.

The so-called "Greek-Classic Revival" has brought forth many new Colonial style churches. The use of colonial chandeliers for effect can play an important role in capturing the feeling of early America. The large chandelier shown in the protograph of the Zion Lutheran Church was designed to accommodate a floodlamp in the bottom to give additional high intensity illumination in the area directly below. Special effects such as this can be achieved if the lighting system is planned early in the designing stages of the church.

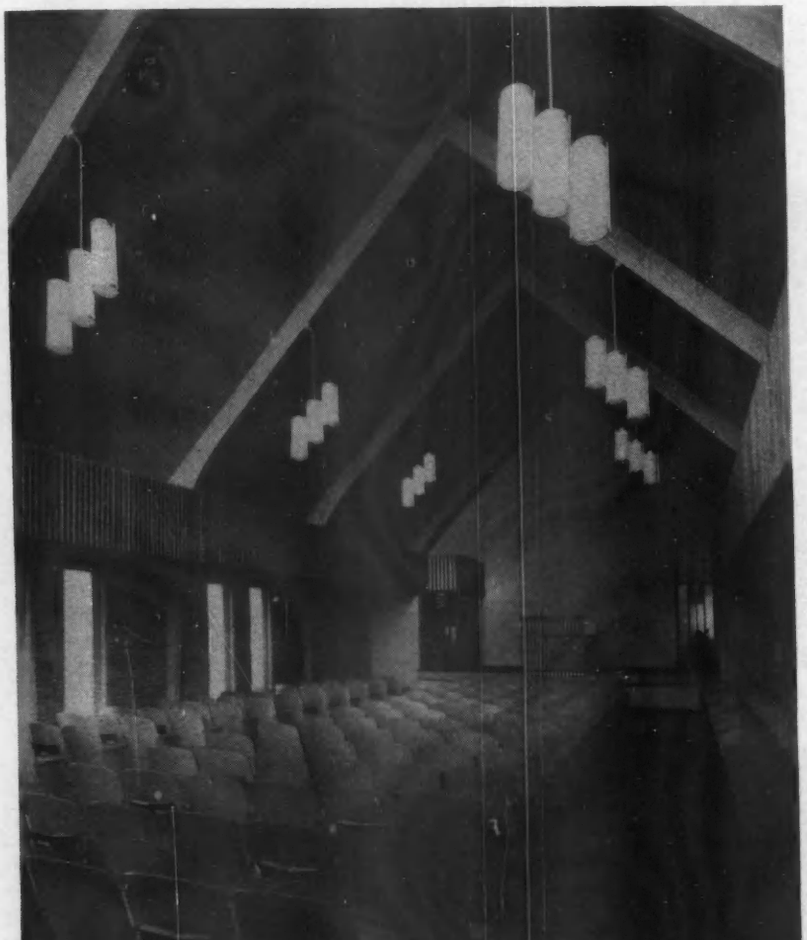
Large chandelier accommodates a floodlamp to give additional high intensity illumination in area below.

With awareness of new lighting levels, many churches throughout the country are embarking on programs of redecorating and relighting. Disappearing are the old single lamp glaring glass globes and the heavy ornate luminaires which were designed more for esthetic beauty than light giving sources. New traditionally designed fixtures incorporating the Old World design feeling yet engineered to include modern illumination practices, can give rebirth to many church interiors. The "before and after" photographs of S. S. Cyril and Methodius Church indicates how a relighting program can revitalize and glorify an old interior.

The objectives of good church lighting are to help make the church functional, to pyschologically encourage an atmosphere for worship and to make the building more beautiful. Remembering that light is seen as well as seen by, its appearance should be calculated as carefully as the foot candles it produces.

EIGHTH CHURCH OF CHRIST

MINNEAPOLIS, MINNESOTA



ARCHITECT:

David J. Griswold & Associates
Minneapolis, Minnesota

ENGINEER:

Orr-Schelen Inc.
Minneapolis, Minnesota

ELECTRICAL CONTRACTOR:

Harris Bros.
Minneapolis, Minnesota

DISTRIBUTORS:

Terminal Electric Corp.
Minneapolis, Minnesota

Lighting Equipment by:

Jer-Dee-Lier

4336 Coolidge Avenue
Minneapolis 24, Minn.

INSTALLATION:

NAVE Two rows of three fixtures each Jer-Dee-Lier No. 5726 without cross, wattage 3-300 Watt R40 downlites and 6-A21-100 Watt lamps, wired for 2 circuits, finished in Satin Anodized Aluminum, three Snow White 8" x 20" closed bottom glass cylinders.
Footcandles maintained 30 FC. Each fixture wired for 900 watts downlighting and 600 watts for uplight controlled by 2 switches.

FOYER Three Jer-Dee-Lier number 5707 with gold crosses, wattage 3-A21-100 Watt lamps each, finished Satin Anodized Aluminum, Snow White 12 inch glass bowl.

EXTERIOR Five Jer-Dee-Lier number 5714 brackets with gold cross, wattage 1-A21-100 Watt lamp, finish Satin Anodized Aluminum, Snow White 4" x 8" round bottom glass cylinder.

Residential Lighting

A New Tonic for Lighting Sales

Planned Lighting For Living!! Elegant furnishings, efficient and glamorous lighting are trademarks of Adoration Homes.

IN today's selling, knowledge of technique is almost as important as knowledge of people. This is the story of a creative salesman who applied both kinds of knowledge and scored an important victory for the modern approach to home lighting.

The salesman is Hugh Saussy, Northern and Central Florida representative for the Progress Manufacturing Co., world's largest producer of residential lighting fixtures and related electrical products. Hugh, who is a far cry from the old-time "tub-thumping" salesman, relies for his considerable success on cool logic and the most modern sales tools—the lumen count method, for example.

As the 1960 Central Florida Parade of Homes was taking form, Hugh recalled vividly the 1959 exhibit—a beautiful display of homes, but marred, in Hugh's expert view, by ill-coordinated, sadly inadequate home lighting. Hugh then called on Mr. D. W. Bliss, of Orlando, builder of the Adoration, a 10 room rancher, designed to sell for $35,000. (Architect, Carl E. Epting, Jr., Orlando).

Hugh told Mr. Bliss that his model home was magnificent, but that, in his own opinion, proper illumination was thoroughly lacking. He offered to make a lumen count survey of the home. What was a lumen count? Hugh likened the lumen to the BTU—that is, the lumen is a unit of light, just as the BTU is a unit of heat . . . and the home needs an adequate supply of lumens, just as surely as it needs its BTU's. Mr. Bliss understood at once, and was keenly interested.

Hugh made his lumen count. Result: his suggested layout called for *fifteen additional fixture outlet boxes.* Mr. Bliss agreed completely, placed an order with Hugh's local Progress distributor for *fixtures whose list value was $466.90* vs. the original allowance of $50.00

Most important result: Mr. Bliss' Adoration home was the standout of the home exhibit, and an important Florida builder had been won over completely to the modern concept of Planned Lighting for Living. In the future, Hugh expects, Mr. Bliss—in company with a steadily-growing group of progressive builders—will offer the home-buyer a choice of three lighting budgets: ideal home illumination, adequate home illumination (about $200.00) and the $50.00 budget.

Choice of the $50.00 budget is expected to be rare.

Lighting Adds Charm

Lighting and Imagination have been put to work in the James Jensen home in Euclid, Ohio. Lighting makes life more pleasant and comfortable for every member of the family.

Valance lights, lamps and shades of correct heights and sizes, hanging fixtures, spotlights and wall brackets, as well as recessed lighting—all work together to bathe this residence in glareless and shadowless light.

In the kitchen, the long fluorescent wall bracket over the range makes surface cooking easier. The giant (28 inch) white ceiling fixture and the bracket lights above the sink and work counters eliminate possible eye fatigue. The dining area is lighted by ceiling spots, and a pull-down fixture. Wall and ceiling lighting in the children's rooms create a relaxed atmosphere.

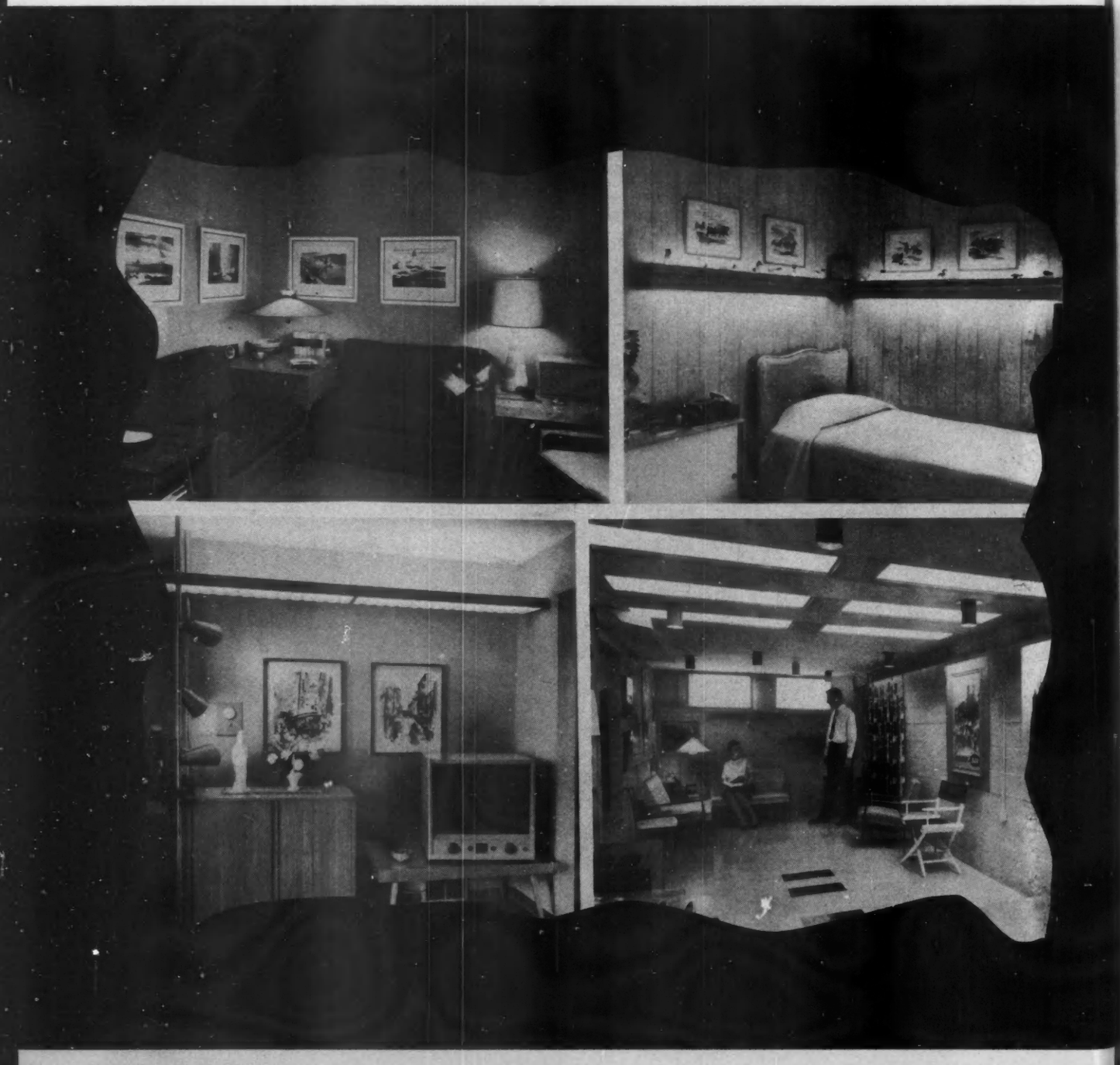
Lighting has even been used to add to the family's living space. A very narrow second floor hall was made useable through a long bracket light and three small bubble hanging fixtures. This area is now suitable for reading or sewing; or to house an overnight guest.

The recreation room gives the impression of spaciousness thanks to a 28 ft. cornice lighted by 40 watt fluorescent tubes. Ceiling panels using 40 watt fluorescents and high-hat spots, controlled by a dimmer system all add up to give excellent lighting.

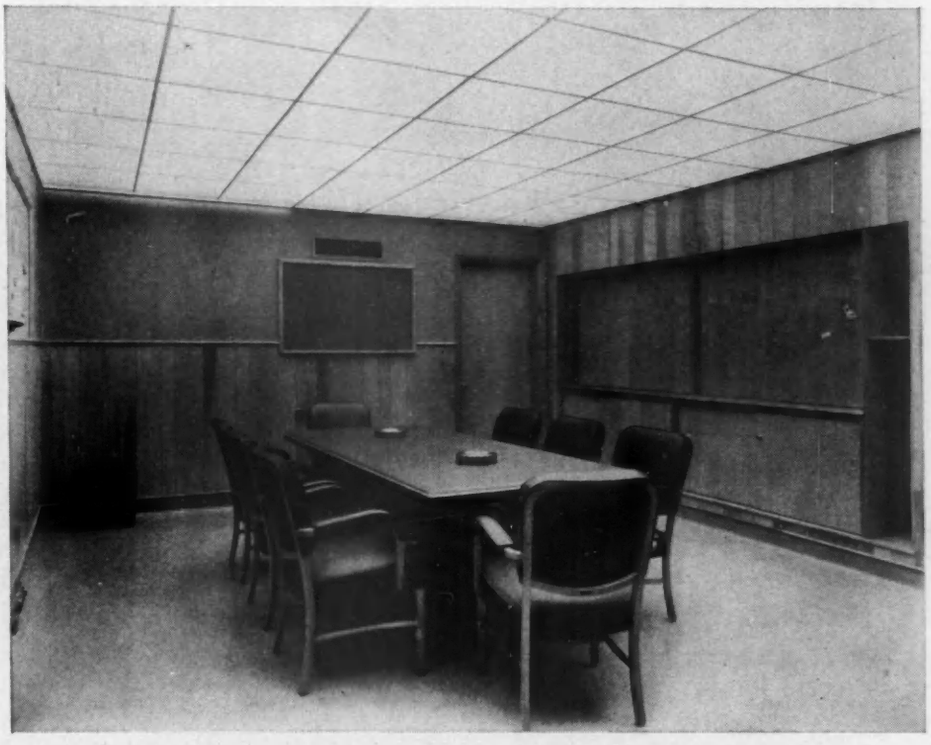
Mr. Jensen says: "The small-to-average-size room should have at least four light sources. In addition to general lighting fixtures, there should be some portable lamps."

Mr. Jensen should know what type of lighting is best for residences for he is head of the "Academy of Lighting Arts" and supervisor of residential lighting in the General Electric Lamp Division. He has educated legions of people on the subject of "good lighting" and . . . he practices what he preaches. . . .

Four views of areas in the James Jensen home. Photos by Andrew Cifranic, Cleveland Plain Dealer.



Clean Lighting For Conferences



Streamlined simplicity and excellent lighting are combined in this fine conference room.

Office Lighting

This Conference Room at the Edwin F. Guth Company, St. Louis 3, Missouri features the new Non-Combustible Gratelite Louver-Diffuser* Electric Ceiling.

These new 2′ x 2′ module Gratelite panels are comprised of sight-saving ⅜″ cubicle openings compression molded of a special non-combustible plastic listed by Underwriters' Laboratories, Inc. with a flame spread rating of only 25.

NC (non-combustible) Gratelites provide high lighting efficiencies with low brightnesses and 45° x 45° shielding. The smaller ⅜″ open cubes assure good lamp hiding power, better diffusing qualities and maximum "blending power" to produce velvetized illumination.

NC Gratelites are held in a sturdy Una-Tee suspension system with Guth fluorescent strip lights mounted above. Footcandles can be varied by a dimming device from 50 to 400 F. C. depending upon the specific activity scheduled for the conference room.

And best of all—NC Gratelites practically eliminate maintenance in this handsome conference room since they're molded from a non-electrostatic plastic that actually repels dirt and dust.

NC Gratelites are 77% efficient and include a built-in ultra-violet retarder to seal in the cheerful, white beauty.

*®U. S. Pat. No. 2,745,001. Canadian Pat. #538,245.

NC Gratelites are sold by the Edwin F. Guth Company, St. Louis 3, Missouri.

Winners in Architectural Lighting Competition sponsored by New York Section of Illuminating Engineering Society. Left to Right: 1st prize, Luellan Fields; 2nd prize, Samuel De Santo; 2nd prize, William Plyer; 3rd prize, Mrs. C. Herskowitz; 3rd prize, Charles J. Spie and Honorable Mention, Owen Brown.

Winners Student Architect Competition

A capacity group of over 150 engineers, architects and guests were present at the 465 Restaurant for the award ceremonies of the 18th Annual Student Architectural Lighting Competition. The Competition is conducted annually by the Allied Arts Committee of the New York Section of the Illuminating Engineering Society.

The Competition, this year concerned with the design and lighting of an in-town airline ticket office in a large city, attracted well over one hundred entries from students at Columbia University, Cooper Union and Pratt Institute.

Highlighting the award ceremonies at the dinner meeting as speakers and competition judges were Robert Jacobs of Kahn and Jacobs, Architects; William Pahlmann of William Pahlmann Associates, Interior and Industrial Designers and John Plantinga of Meyer, Strong & Jones, Engineers. In his remarks, Robert Jacobs stressed the need for lighting designers who could couple imaginative design with real engineering skill—"a rare and precious combination"—he said. Commenting that too often the interior designer is thought of as "someone to make something look pretty", William Pahlmann stated that the interior designers problem was to work with the architect to provide a space in which the human being could best function. John Plantinga indicated that the engineer's problem was to preserve the ideas of the architect and interior designer while translating them into the necessary engineering materials.

One unusual aspect of the meeting was that after the program had been concluded the judges spent nearly two hours with the students who had submitted designs chosen in the preliminary judging. The student designs were criticized on the basis of imagination and originality, organization and cohesiveness, and integration and utilization of space and light.

For the New York Section of the Illuminating Engineering Society of which William H. Keen, General Electric Company is President, and Henry Wald of Wald and Zigas, Engineers is Manager of Associated Activities, the Allied Arts Committee consisted of Joel E. Rubin, Kliegl Bros. Lighting (Chairman), Alex Sitkin of Jaros Baum and Bolles (Vice-Chairman) and H. E. D'Andrade of the General Electric Company (Associate).

I.E.S. Lighting Handbooks were awarded to 18 semi-finalists. Award certificates and cash prizes went to the following students:

Columbia University Award: Miss Luellan Fields.

Cooper Union Award. Miss Joyce Hedman.

Pratt Institute Award: Mr. John Crosby and Mr. George Large (Team).

Grand Award 1st Prize: Miss Luellan Fields of Columbia University.

Grand Award 2nd Prize: Mr. Samuel De Sante and Mr. William Plyer of Pratt Institute.

Grand Award 3rd Prize: Mr. Charles J. Spiess III and Mrs. C. Herskowitz of Pratt Institute.

Honorable Mention: Mr. Owen Brown of Pratt Institute.

Raymond Smart, Northeast Regional Vice President of the I.E.S., who took part in the ceremonies at the meeting, stated that the winning designs would be exhibited in the I.E.S. Northeast Regional Conference at Wentworth-by-the-Sea, New Hampshire, June 8 and 9; from there go on to the national I.E.S. Technical Conference in Pittsburgh September 11-16; and might finally be selected for exhibition at the International Commission on Illumination Conference in Vienna in 1963.

Store Lighting

Four Miles of Slim-line Lamps in Shopping Center

Almost four miles of lighting, 18,000 feet of slim-line lamps supplied by Sta-Brite, provide virtually shadowless light for Miami's new Palm Springs Shopping Center.

More revealing than brilliant sunlight, more impressive than moonlight, time-tested, glare-free fluorescent lighting by Sta-Brite is drawing more and more customers to modern shopping centers.

Day and night, this revolutionary lighting works selling magic for store owners by enhancing the color and detail of merchandise on display, influencing more shoppers to shop longer, and creating increased "impulse buying."

The builder/owner of Palm Springs Shopping Center, the Palm Springs Investment Company, and Lloyd Frank Vann Associates, the architects, specified a wide variety of Sta-Brite stock fixtures to meet the needs of each tenant of this beautiful shopping paradise.

The Sta-Brite Company, headed by Nat Furman and Sydney Kandel, has grown in only a few years to national status in distribution. Its modern plant at 3550 N. W. 49th Street in Miami, has completed installations at shopping centers, airports, schools and public buildings throughout the southern region of the United States.

A wide variety of fluorescent fixtures from all types of lighting requirements is available from Sta-Brite's large inventory. In addition, imaginative and economical fixtures can be custom-designed for specific applications.

Interior of Jackson's/Byron's Department Store, in Miami's new Palm Springs Shopping Center. Sta-Brite fluorescent fixture model SPS2x8-496 was installed in continuous runs of units 8' long x 2' wide with Sta-Plex plastic louvered shielding; 12'6" centers and 125' candles at counter level.

The Salesman is Lighting

By Rose Coakley

BUILDING contractors have a new salesman for their homes, a salesman who can work quietly but efficiently and who doen't even ask a commission on the sales.

The salesman is lighting.

The importance of lighting in home sales is the result of the new American way of life. Often it's only at night that both husband and wife are available to make a house-shopping trip.

That means the contractor needs lighting fixtures in the home which not only are attractive in themselves but will help sell the house.

Outdoor lighting, for instance, can do more than just illuminate the contractor's name. It can make the driveway or patio that much more attractive to the prospective buyer by showing him in no uncertain terms that there are outdoor living areas available which can be used not just when the sun shines but in the evening as well.

Inside the house itself, what does the prospective buyer look for?

The answer is flexibility, the key work in today's modern living.

The popularity of pull-down fixtures, those that are on a reel and cord with three-way switches, proves that homemakers like to have as much flexibility in lighting fixtures as possible. Give them a choice, and this is the type they'll take.

The homemaker wants more than one control for the various fixtures in a particular room so she can change the room atmosphere and, in a sense, change the decor of the rooms simply by turning a switch.

But the fixtures, to meet with the homemaker's approval, must do even more than this.

The fixture itself must enhance the room's decor. It must be attractive when the light is turned on, but it must remain attractive when it is unlighted, too.

With more textures, finishes and surface finishes, a broad range of fixtures is available to fit almost any room decor.

It's up to the contractor, too, to anticipate the homemaker's desires by following the trend to more mass in fixtures.

Smaller lighting elements should be grouped together into one lighting mass, such as three-light clusters either in line or in a circular, triangular, rectangular or hexagonal design.

This type of grouping, for instance, can be used as a room divider to tie free-standing furniture into the room architecture.

But this doesn't mean that fixtures have to look like something out of a space ship.

There seems to be increased interest in fixtures which follow the traditional design patterns.

In some cases, homemakers are using these traditional fixtures in contemporary homes with contemporary furniture.

Some of these pieces may not be extremely good lighting, but they are very decorative and very close to providing a living, home-like quality.

We have discovered in the past that sales always have been higher on the more subtly-styled fixtures.

No matter what you have heard about luminescent panels and ceilings (and they still are a long way from being within reach of the average homeowner), there still will be a place for decorative lighting fixtures.

The average homeowner today is more aware of lighting in his home than ever before and is willing to spend more money to achieve unusual lighting effects.

It is up to electrical contractors as well as the firms which design and manufacture lighting fixtures to educate the public on good lighting and its proper use.

Southampton School

—continued from page 19

Maintenance

In addition to selecting lighting equipment for functional suitability and appearance, consideration was also given to maintenance factors.

In all units selected, lamps are easily accessible, and cleaning requirements of reflectors and lenses are at a minimum. For example, the lenses for the classroom fluorescent units are merely slid left or right to free one edge from its supporting lip, and dropped down and slid off the opposite lip.

The gym units, as previously mentioned, require virtually no cleaning since dust does not gather on the smooth exposed reflector surface and the prismatic surface is sealed with a metal cover. Lamps are changed from the floor with a pole.

Locker room reflector bowls are opened by loosening two "captive" thumb screws (they won't fall out) on opposite corners of the frame, and the bowl hangs suspended by a chain fixed to the ceiling. Thus, the custodian's hands are free to work and he is unconcerned about putting down, picking up, breaking the bowl, etc.

The recessed hall-locker units are nominally dust tight and are opened by loosening two captive thumbscrews. The lens opens on two concealed drop hinges, again allowing the attendant free use of his hands.

In the case of the kitchen fluorescent units, the "U" shaped lenses are framed in metal, hinged along one edge, and snap shut on the other.

The Southampton cleaning schedule calls for cleaning of lighting equipment every two months, on a staggered basis. Burnouts are replaced as they occur.

Installation

Ease of installation is another factor considered by the Board, and the equipment selected is noteworthy in this respect, particularly in the case of the high fixtures in the gym and boiler room. These units consist of two parts—a yoke and a reflector assembly. In securing this equipment to the ceiling, the electricians handle only the light-weight yoke and it can be bench assembled with conduit hangers which are then secured to the ceiling, or it may be secured to previously installed hangers from a scaffold or ladder. The reflectors are then installed with a simple lug attachment, avoiding the necessity of wrestling with the reflector while making conduit and hanging connections.

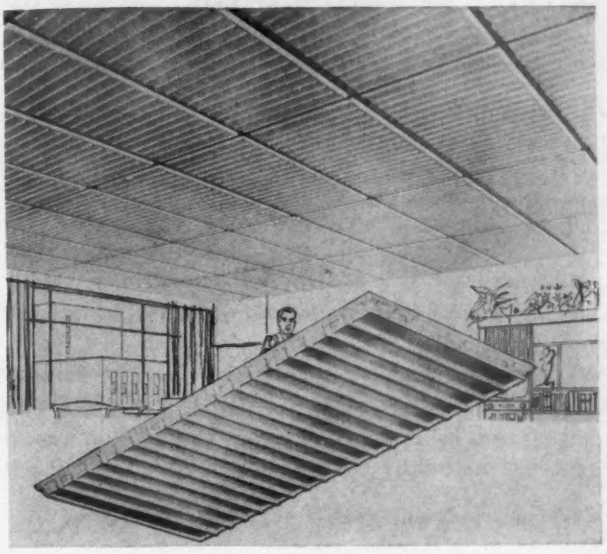
The recessed incandescent and fluorescent fixtures have metal boxes which fit into the ceiling and are secured to building structural members in a standard manner.

The locker room bowls fasten to a ceiling plate which is quickly and easily attached to the outlet box.

The fluorescent fixtures in the kitchen are supported from a stud-equipped metal strip secured to the ceiling. Thumbnuts tighten the fixture in place, eliminating the need for hand tools.

New Sky-Glo Illuminated Ceilings

Entirely new Sky-Glo illuminated ceilings designed for greater efficiency, versatility and savings in installation and servicing are announced by the Benjamin Division of Thomas Industries Inc., Louisville, Ky., leading manufacturer of commercial, industrial, and residential lighting fixtures.



The new Sky-Glo system is based on 2 x 4 foot and 2 x 2 foot vinyl, polystyrene and acrylic diffusers. Featuring a new acoustical vinyl panel illustrated above, Sky-Glo is also available with a variety of prismatic diffusers plus ½" cube aluminum or plastic louvers.

This new system is described as the "fastest installing on the market" and features a simplified suspension leveling method. The grid network is suspended directly from the lighting element and the inverted T-grid is of strong aluminum alloy.

In addition, the new Sky-Glo line offers a wide selection of shielding elements and lighting equipment, including Power-Groove lamps, Rapid-Start, Slimline, and 800 ma. High Output.

For additional information on the new Benjamin Sky-Glo illuminated ceilings, write to Benjamin Division, Thomas Industries Inc., Louisville, Ky.

Million Dollar Light Bulb Sales Push to Feature Five-Point Selling System, and a New Mister Magoo Campaign

General Electric has announced a fall million dollar light bulb sales push built around what it calls "The five-point point-of-purchase selling system."

The "five-point" system is G. E.'s name for a marketing approach which calls for activities in five key areas—product, package, merchandisers, display, and advertising—all culminating at the point of purchase.

Important innovations in each of these areas, of benefit to both purchaser and retailer, will be featured in General Electric's intensive fall bulb-selling program, according to Robert V. Corning, Large Lamp Department marketing manager.

"Over the years," Corning said, "the lighting industry has conducted many sales activities based on exploiting a single feature, such as a new package or an improved product. Our new activity, however, employs a broad approach which recognizes that many marketing elements are important to both customer and retailer.

The fall promotion, which gets underway the week of September 19, represents a greatly expanded and improved follow-up to a campaign in the spring.

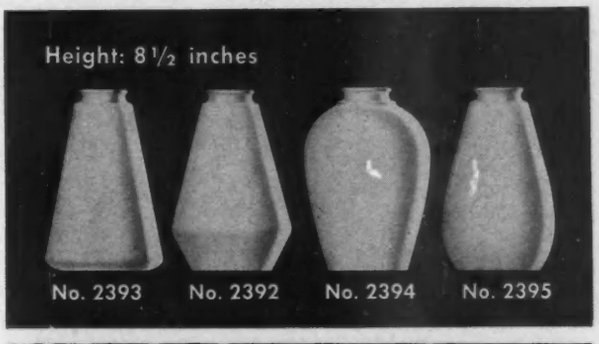
"This was the most successful such activity in the entire history of the G-E Large Lamp Department," Corning said.

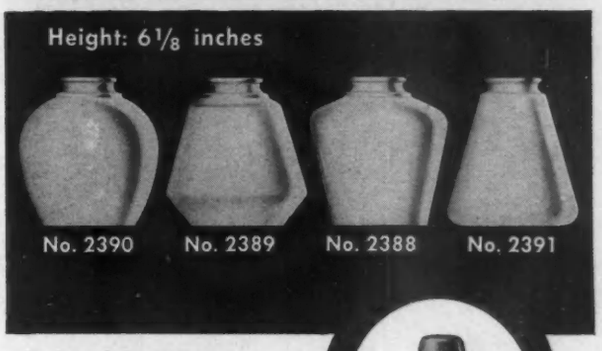
He credited much of the success of the promotion to a novel local TV spot commercial campaign featuring the nearsighted Mister Magoo, and to successful retailer tie-in activities and displays. This phase of the promotion will be continued in the fall, with Magoo as a political candidate under the campaign slogan, "Vote for Magoo—and G-E Bulbs Too!"

KEELITE

heat-resisting globes

for your modern and contemporary lines





NEW TYPE HOLDER!

Integral contour . . . no outside screws. Developed especially for machine-made glass in cooperation with Charles Richter Co., Mt. Vernon, N.Y.

These decorator-styled globes are heat-resisting opal glass . . . produced by low-cost, uniform machine methods. Fit any standard holder. They are available for immediate shipment in any quantity.

Profit *now* from the service, styling and economy afforded you by Thatcher Glass. No delay . . . no premium for heat-resisting glass.

Thatcher Glass

Write for complete specifications and prices

THATCHER GLASS MANUFACTURING CO., INC. JEANNETTE, PA.

American Home Lighting Institute Reports

Housing starts for May, under the new statistical methods of the Census Bureau, totaled 128,300 against a total of 156,000 for May of 1959. This was a slight increase over the 125,000 housing starts reported for April of this year. There were more predicitions of a steady rise in housing starts in coming months with an easing of mortgage money.

Retail competition will soon bring announcement by a major distributor of a single "realistic" price "to compete with chain stores, discount houses" and numerous other retail outlets now entering the fixture field.

Wall brackets may be on the comeback trail. They have never disappeared from the scene, but a little more than a generation ago, almost every fine home had many wall brackets. A strong resurgence could affect total sales favorably.

AHLI queried a number of manufacturers. Five checked their sales and reported an upward trend in sales of wall brackets. Two reported no signs of such a trend. A prominent editor of one of the nation's largest magazines has told AHLI that many more brackets of better design are needed for good lighting and good decoration.

Model Homes for display of lighting fixtures during American Home Lighting Fixture Month and National Home Week are a major sales promotion opportunity. If you haven't already arranged to participate in a model home promotion, the time is getting short. Arrangements can be made usually by calling the sales promotion manager of the local electric service company and talking with him about tie-in into the company's model home promotion. Otherwise, arrangements can be made directly with a builder or through your local home builders association.

New Members: Newest manufacturer member is Charles I. Rosen of Artolier. New distributor members include Morgan-Wightman Supply Company of St. Louis; Philip Lazar of Philadelphia; Jacoby Electric & Supply Company of Philadelphia; Staday Lighting, Inc. of New York, and the Frankelite Company of Cleveland.

New Literature

Leaflite Brochure

A new full-color brochure, describing the recently developed Leaf-Lite Luminous Ceiling, has completed publication this week.

The Leaf-Lite Ceiling, designed by Charles Deaton and developed by the staff of Luminous Ceilings Inc., has passed the test installation period with several very successful commercial, office, lobby, and retail constructions in the United States and Canada.

The brochure, illustrating this unique, textured architectural ceiling, can be obtained by writing: Luminous Ceilings Inc., 3701 N. Ravenswood Ave., Chicago 13, Illinois.

Technical Literature — Polyurethane Wire Enamel

Carthane 8063 Polyurethane Magnet Wire Enamel for dip application has widest baking range and fastest solderability of available urethane enamels. Cut-through temperature is high and resistance to acetone and other solvents is excellent. Data Sheet CPP No. 8 from The Carwin Company, North Haven, Connecticut.

Brilliant New Theatre Lighting Catalog

The new Century Theatre Lighting Catalog contains 101 pages of authoritated information on all types of stage lighting. It contains complete lighting lay-outs for ten different types of performance areas ranging from the simple lecture platform to school stages, to a large outdoor amphitheatre. Documentary articles on lighting and comparative charts on the performance of different types of instruments are included. The catalog is replete with information on lighting control systems, including the latest electronic types. Architectural details are provided to show the requirements for installing stage lighting instruments in wall and ceiling slots, booths, etc. Write to: Century Lighting, Inc., 521 W 43 St., N. Y. 36, N. Y.

New Folder Gives Complete Details of Smithcraft Lease-Light* Plan

Last month the Smithcraft Corporation, Chelsea, Mass., announced the Smithcraft Lease-Light* Plan, by which owners and tenants can least modern Smithcraft fluorescent lighting equipment for new or old buildings. Now, complete details for the plan are available in an attractive four-page brochure.

The Smithcraft Lease-Light* Plan permits owners or tenants in the United States and Canada to rent or time-pay lighting modernization or new construction, while freeing working capital for other uses. The total contract price can be as low as $1250, with or without installation costs included. There is no upper limit. Under the plan, Smithcraft pays the distributor and electrical contractor, while payments by the user are made to General Electric Credit Corporation.

In addition to preserving liquid working capital, the Smithcraft Lease-Light* Plan offers many other benefits: Normal borrowing capacity remains undisturbed. Installation costs may be included in the leased package. The effects of obsolescence are minimized. And, of course, the plan allows owners and tenants to modernize immediately with high-efficiency fluorescent lighting —an important factor in increasing sales, boosting morale and worker efficiency and increasing overall profits.

Smithcraft's brochure contains most of the information necessary to plan for a complete lighting installation under the Lease-Light* Plan. A chart of approximate monthly rental charges is included, as well as a comparison of the total capital invested when buying, renting, or time-paying for installed lighting equipment.

The Lease-Light* brochures are available from Smithcraft Corporation, Chelsea 50, Mass.

Charts

Coatings Selector, released by Bee Chemical Company, Logo Division, is a guide to the selection of specialty coatings available for application on plastics, metals, glass and wood. The charts, which can be mounted for ready reference, show the uses and characteristics of the company's spray, dip and flow coating materials, vacuum metallizing coatings and standard plastisol formulations. Bee Chemical Company, Lansing, Ill., or Bee Chem. Co., 12933 So. Stony Isld. Ave., Chicago 33, Ill.

Industrial Textile Fiber Materials Booklet Published by Owens-Corning Fiberglas

"Fiberglas Textile Fiber Materials For Industry", a 52-page illustrated booklet which is the most complete compilation of technical data on the subject yet assembled, has been published by Owens-Corning Fiberglass Corporation. The booklet is designed to show the wide range of industrial applications in which Fiberglas materials made from the continuous filament and staple fiber processes can be effectively utilized.

The booklet contains sections on continuous filament yarn, treated yarn, staple fiber textile materials, cordage and sewing thread, scrim, mat, roving, chopped strands, rolled fibers, fabrics and tapes, and standard packages for Fiberglas textile fiber materials.

Other features of the booklet include an explanation of how Fiberglas is made, a textile fiber comparison chart, and a section describing the fabrication of Fiberglas textile fiber materials.

For copies of the new booklet, write to Owens-Corning Fiberglas Corporation, General Offices, Toledo 1, Ohio.

New Mercury Floodlighting Catalog

A new catalog just issued by Stonco Electric Products Company, 333 Monroe Ave., Kenilworth, N. J., describes their complete line of new higher-output mercury vapor weatherproof floodlights for low-cost wide-area lighting of parking lots, ball fields, industrial and architectural sites. Included are illustrations and specifications on single units and clusters for pole-top, mid-pole, wall or surface mounting—with or without integrally mounted transformers. Write manufacturer for catalog MV60.

Interim Brochure

Three new series of fixtures have been announced by Virden Lighting, division of John C. Virden Company, Cleveland, Ohio. They are illustrated and available in a new brochure called "The Light Idea . . . New Custom Creations." The 4-page brochure is in full color and describes the application of each of the fixtures, their sizes and description. The Sun'N Sand series features imported sandtone reed tastefully highlighted with brass trim . . . in pulldowns, accent lights, clusters and ceiling fixtures. The Florentine series features exotic opaque white globes encased in aluminum scrolls flecked with gold. Available in single and 3-light clusters. The Planter series features two fixtures which add utilitarian lighting to a highly decorative, polished brass planter unit. A free brochure may be obtained by contacting your local Virden distributor or writing direct to Virden Lighting, division of John C. Virden Company, 5209 Euclid Avenue, Cleveland 3, Ohio.

Specifier's Guide for Mercury-Lamp Ballasts — GEA-7056

Ten-page publication discusses how to select and apply General Electric mercury-lamp ballasts. Ballast types include (1) standard indoor and (2) special purpose weatherproof and high temperature units. Publication contains list prices, dimensions, wiring diagrams and other data for selecting and applying both standard and special mercury-lamp ballasts. General Electric Company, Schenectady 5, New York.

Association News

New Officers Are Elected by Industry Units In National Electrical Manufacturers Association

Officers have been elected by three industry Sections of the National Electrical Manufacturers Association, it is announced by Joseph F. Miller, NEMA Managing Director.

Newly chosen officers follow:

Industrial Heating Units and Devices Section:

Chairman—Robert P. Kelley, Chicago, Ill., Vice President & Manager, Appliance Products Sales, Tuttle & Kift, Division of Ferro Corporation.

Vice Chairman—R. F. Kitchen, Milwaukee, Wis., Product Section Supervisor, Cutler-Hammer, Inc.

Chairman, General Engineering Committee—G. B. Desloge, St. Louis, Mo., President, Watlow Electric Manufacturing Company.

Vice Chairman, General Engineering Committee—William R. Russell, Shelbyville, Ind., Manager—Heaters and Devices Engineering, Industrial Heating Department, General Electric Company.

Industrial Laminate Section:

Chairman—R. R. Titus, Oaks, Pa., President, Synthane Corporation.

Manufactured Electrical Mica Section:

Chairman—E. O. Hausmann, Newark, Del., Vice President, Continental-Diamond Fibre Corporation.

* * *

In addition to these officers, W. B. Belt, Long Island City, N. Y., Chief Engineer, Morganite Incorporated, was elected Chairman of the Technical Committee of NEMA's Carbon Section.

* * *

Electrical manufacturers making like products are grouped in the same industry units which NEMA calls Sections.

Electrical Group Elects Joseph B. Schaeffer

Mr. Joseph B. Schaeffer, manager contract services, Sachs Electric Corporation, has been elected president of the St. Louis Electrical Board of Trade. He succeeds William A. Mann of the General Electric Company.

Other officers elected were: Joe Bussmann, Jr., Bussmann Manufacturing Company, first vice president; Eugene R. Kropp, Union Electric Company, second vice president; C. E. Butler, Jr., Butler Electric Company, Treasurer. The Board's Executive Committee appointed Harry Guest, formerly Secretary-Manager of the Board, Executive Vice President.

Elected for a term of two years on the Executive Committee were: C. B. Fall, C. B. Fall Co.; George P. Gamble, Union Electric Co.; A. H. Hollerbach, St. Louis Public Service Co.; Melton P. Johns, Graybar Electric Co.; John McVicker, Sears, Roebuck & Co.; and, Walter C. Schmieder, Phelps Dodge Copper Products Corp.

Elected to the Executive Committee for one year were: James E. Crotty, General Electric Supply Co.; J. H. Cunningham, Westinghouse Electric Corp.; E. E. Gilcrease, Moloney Electric Co.; J. W. McCarron, Ahrens & McCarron, Inc.; Walter Murphy, Crest Electrical Co.; and Charles Wenner, James R. Kearney Corp.

W. Otto Muller, Missouri Pacific Railroad, was appointed to fill an Executive Committee vacancy.

Mr. Schaeffer has been an enthusiastic member of the Board of Trade having served as both first and second vice president. He is a past president of the St. Louis Chapter, National Electrical Contractors Association and is prominent in NECA's national affairs. He has been a member of the Southwest Kiwanis for twelve years and is currently that organization's program chairman. Until May 1, when Mr. Schaeffer joined the Sachs Corporation, he was secretary of the Carl I. Schaeffer Electric Co.

The St. Louis Electrical Board of Trade, enjoying its fifty-first year of service to the community, is an organization of those engaged in the local electrical industry.

"Joe" Kurzon Saluted by Electrical Contracting and Allied Industries

Joseph Kurzon, of the Joseph Kurzon Co., was honored by over 350 leading members of the group of industries surrounding the electrical contracting field at their annual dinner for the United Jewish Appeal at the Hotel Roosevelt. A pioneer in the industry and in its philanthropies, Mr. Kurzon was hailed for his contributions to the progress of the trade and the well-being of his fellow-men.

Harold J. Vorzimer, of the Federal Pacific Electrical Co., himself a veteran trade and UJA leader, presided as general chairman of the group, which is known as the Electrical Contractors, Manufacturers, Wholesalers Representatives and Sign Division of the United Jewish Appeal. Following a stirring appeal for aid to refugees overseas by the Rev. John Stanley Grauel, Middle East expert, those present contributed over $200,000 to UJA's double-pronged drive—for the regular campaign and for the Special Fund aiding refugees.

This was hailed by the chairman as a 20% increase over last year's total. Mr. Grauel, a Methodist preacher who left his pulpit to help the people of Israel win their freedom, was first mate on the famous refugee ship, "The Exodus." UJA's regular campaign provides the necessities of life for over a half million men, women and children in distress and danger areas in twenty-six countries across the globe. The Special Fund is for the rescue, transportation and resettlement of refugees, the rehousing of older newcomers in Israel and the absorption of those now arriving and to come.

The United Jewish Appeal of Greater New York is the sole fund-raising agency in the metropolitan area for the United Israel Appeal, the Joint Distribution Committee (including ORT), the New York Association for New Americans, the National Jewish Welfare Board, the American Jewish Congress and the United Hias Service.

Seaway Control Room Lighting Wins Northeast Regional IES First Prize

Lighting for the Control Room of the Robert Moses Power Dam, Massena, N. Y., St. Lawrence Power Project took top honors in the applied lighting competition at the Northeast Regional Conference of the IES, held at Wentworth-by-the-Sea, Portsmouth, New Hampshire in June. The award was presented to Robert Chin of Uhl, Hall & Rich, Boston, Mass., (an affiliate of Chas. T. Main, Inc.) who were engineers for the Project.

The fixtures were designed and manufactured by Litecontrol Corporation, Watertown, Mass. An unusual arrangement is the tilted position of the board lighting troffers resulting in two ceiling levels, and by means of asymmetric lenses, illuminating the boards and their meters evenly from top to bottom. Dimmers permit any intensity from the full 152.8 down to 2 foot candles.

The lighting for this Control Room had previously won first prize in the Boston Chapter competition of the IES.

Zahour Elected I.E.S. Regional Vice President

Robert L. Zahour, manager of lamp applications for the Westinghouse lamp division, has been elected regional vice president of the Northeastern region of the Illuminating Engineering Society.

His two-year term of office will begin October 1. The region covers six sections and one chapter in the area which extends from Albany to Trenton.

Mr. Zahour is a charter member of the Connecticut section of I.E.S. He helped to organize the New York section two years ago. He served as its first chairman.

He is a Fellow member of the I.E.S. and a member of two of its national committees. He is also a member of the American Institute of Electrical Engineers. He is active in the A.I.E.E. production and application of light committee.

A graduate of Case Institute of Technology where he received his B.S. and E.E. degrees, Mr. Zahour is also a registered professional engineer in New Jersey, New York, and Connecticut.

Lighting NEWS LETTER

NATIONAL ASSOCIATION OF Electrical Distributors Western Region Convention, Las Vegas, Nev., Oct. 18 through 21, 1960.

* * *

ELEVEN MILE SECTION between N.Y.C. and Connecticut border on New England Thruway to be furnished with 170 underpass luminaires, 20 poles of mercury floodlighting for interchanges, and 1040 luminaires with mercury lamps. All by Westinghouse.

* * *

AFTER THIRTY YEARS in Manhattan, N. Y. office of American Nickeloid Co. moved to Garden City, L. I. (1001 Franklin Ave.)

* * *

ULTRASONIC INDUSTRIES, INC., Albertson, L. I., N. Y., formed Canadian subsidiary Ultrasonic Industries (Canada) Ltd., 1512 Eglinton Ave. W., Toronto, Ontario.

* * *

THIS IS THE 25th year of business for Designers for Industry, Inc., 4241 Fulton Parkway, Cleveland 9, Ohio.

* * *

ELECTRA CITY — U.S.A. September 10-18 New York Coliseum. The 8 billion dollar home appliance industry will show electrical needs in America's Home of today.

* * *

THE LIGHT & POWER Utilities Corporation 1035 Firestone Blvd. has purchased the LOCUST Lighting Co. of St. Louis. Manufacturing facilities were moved to L & P's new plant in Memphis.

* * *

MELVIN GROSSMAN IS the architect of the Diplomat Inn. Estimated cost of Inn to be $1,500,000. This is an addition to the plush Diplomat East and Diplomat West (Hollywood, Fla.) opened in Dec. 1958 at original cost of $23,000,000.

* * *

NEW WESTINGHOUSE LAMP Distribution Center at Kansas City, Mo., now open. Covers 43,500 square foot area.

* * *

MARKET DAYS AT Dallas Market Center September 8-9, October 13-14, November 10-11.

NEW YORK GIFT SHOW, Hotel New Yorker & Trade Show Building August 21-26, 1960.

* * *

INTERNATIONAL TRADE FAIR, Montreal, Can., October 25 to November 5, 1960.

* * *

THE MODERN LIVING Home & Flower Show, sponsored by Home Builders Assn. of Chicagoland will be first exposition in Chicago's new $34 million exhibit center, McCormick Place, to open November 18, 1960.

* * *

EXPORTS OF ELECTRICAL industry products valued at more than 1.1 billion dollars help support a million jobs in electrical manufacturing companies, according to Committee of American Steamship Lines.

* * *

PARAMOUNT FOAM INDUSTRIES (Ridgefield, N. J.) has designed a shipping container of polyurethane foam. Light weight and low bulk reduces shipping charges; load cannot shift. Write Public Relations Allied Chemical, National Aniline Div., 40 Rector St., N.Y. 6.

* * *

THE CIRCLE W trademark of Westinghouse Electric Corp. has been redesigned for the fifth time in the company's 74 yr. history. To keep the symbol modern and improve corporate identity.

* * *

NEW FLOODLIGHT WITH a vertical beam spread of only 8°, and a horizontal beam spread of 100°, opens new floodlighting possibilities. Manufactured by WIDE-LITE Corp., Box 191, Houston, Tex.

* * *

A SUPER-POWERED battery-operated lantern with more than twice the candlepower of 1960 automobile headlights and a beam ten times as intense as light from 500-watt household lamp was introduced by Burgess Battery Co. To meet long distance illumination and signal needs of campers, utility crews, industrial users, police and fire departments.

* * *

THE NATIONAL HOUSING Center, 1625 L Street N.W., Washington, D.C., opened a completely new display to remain until September 1960. Among innovations is a dimmer switch using an electronic circuit.

* * *

THE AVERAGE EXECUTIVE is author of about twice as much wordage as the average professional writer, says a dictating machine maker. Par for the course is some 333,000 words per year.

* * *

HE THAT USES many words drowns himself in his own ink like the cuttlefish.

* * *

THOMAS EDISON PATENTED over 1,000 inventions in the course of his lifetime.

School Lighting

—Continued from page 17

drums beating across the land for a new recommended 70 foot candle standard for classrooms with little, if any, of the propaganda mentioning the *quality* of the system producing the foot candles.

A study was conducted by members of the National Council on Schoolhouse Construction for the Joint Task Committee working on the revision of the American Standards Association document on school lighting. This study was made to find out just what visual tasks students on all grade levels did in schools and how much time was devoted to these tasks.

As a result of this study, the National Council's representatives concluded:

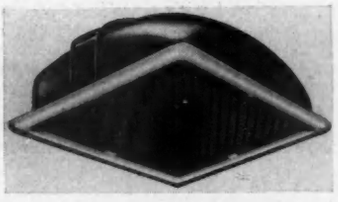
(1) There is a wide variety of visual tasks requiring a wide range of lighting levels (according to the Blackwell research) performed on every grade level.

(2) There was no *one dominant* task falling within a limited range of foot candles on any grade level.

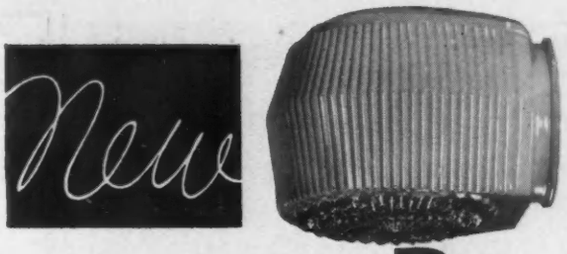
Our conclusion was that there is no way supported by research findings to establish *one* recommended foot candle level for classroom tasks.

For example—just what kind of service are you giving when you recommend a flat 70 foot candles as a preferred lighting level for classrooms? Are you using research findings constructively? What about the many school tasks that require 100—150—3000 foot candles for high visual accuracy and speed? And how do you answer the self-annointed critic who points to the common tasks that Blackwell reported needed only 2 to 10 foot candles for 99 per cent visual efficiency? Why not tell the complete story—including the relationship of lighting systems to foot candle effectiveness, and let the *whole truth* sell your lighting jobs? If you tried it for a while, you might be surprised at the positive response. And besides that, you would sleep better at night.

New, Low Cost Scotch Plaid Recessed Line

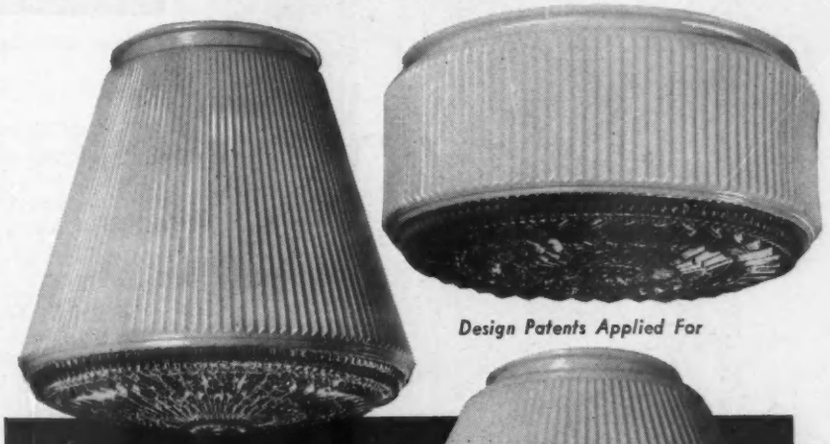


Recently announced by Virden Lighting, is the availability of a new "one piece" housing and trim recessed fixture line. Fixtures are highly attractive and easily installed in new or old, drywall or plaster, residential or commercial applications. Four sizes are available, ranging from 75 to 200 watts. All can be furnished in brass or aluminum trim. For additional information, write Virden Lighting, division of John C. Virden Company, 5209 Euclid Avenue, Cleveland 3, Ohio. Specify free Catalog No. SP 160.



Prismatic-Pleats

and CRYSTAL



Design Patents Applied For

Distinctively modern for kitchens, bathrooms, hallways . . . and new *Prismatic-Pleats and Crystal Line* has sides of gently pleated white enamel and clear crystal bottoms. Ask for prices and samples.

SHAPE	NO.	SIZES Diam.	Ht.	Fitter
	15147	5 13/16"	4 3/8"	3 1/4"
	15151	6 9/16" 8 9/16" 9 3/8"	3 9/16" 4 5/32" 4 1/2"	5 1/8" 7 1/8" 9 1/8"
	15145	6 1/8" 7 5/8"	5 13/16" 7 1/4"	3 1/4" 4"
	15146	6 1/8" 7 3/4"	5 15/16" 7 1/8"	3 1/4" 4"

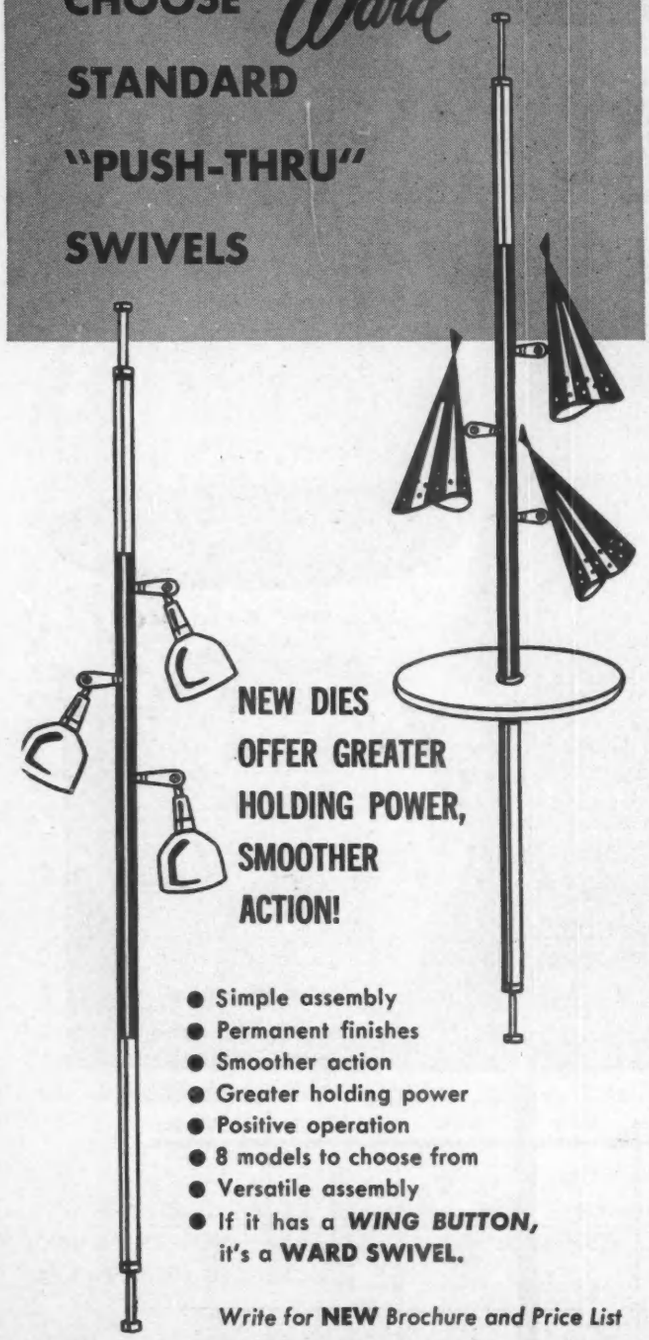
THE **Phoenix** GLASS COMPANY

MONACA, PENNSYLVANIA

NEW YORK • LOS ANGELES • CHICAGO • HOUSTON

DALLAS • MIAMI • WINNIPEG

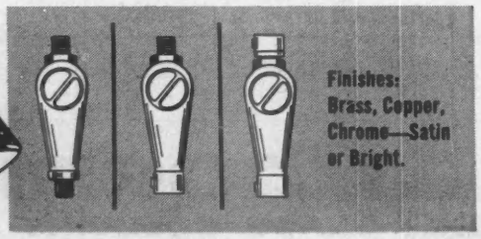
Leading Pole Manufacturers
CHOOSE Ward
STANDARD
"PUSH-THRU"
SWIVELS



NEW DIES
OFFER GREATER
HOLDING POWER,
SMOOTHER
ACTION!

- Simple assembly
- Permanent finishes
- Smoother action
- Greater holding power
- Positive operation
- 8 models to choose from
- Versatile assembly
- If it has a *WING BUTTON*, it's a **WARD SWIVEL.**

Write for **NEW** *Brochure and Price List*



Finishes:
Brass, Copper,
Chrome—Satin
or Bright.

WARD ENGINEERING, INC.
6439 San Fernando Road, Glendale, Calif.

Here, There & Everywhere
About People, Places & Things
by Charles Michalson

Charles Michalson

Mr. & Mrs. Eddie Ring, Circle F. have been away on a 10 week tour of the Far West. Eddie purchased a station wagon and they have taken three of their four children on a trip more for educational purposes than anything else. This was in lieu of sending them to camp. Not a bad idea.

• • •

Charles Gill, aged 72 veteran glass and fixture manufacturer of Philadelphia passed away in June. Charlie was head of Gill Glass Co., until his retirement last year. Aside from being an expert in the glass industry, he was also an expert in bridge and this I know. Another one of the old school gone.

• • •

Val Ralph—Trade Winds Electric, Lodi, N. J. at New York Lamp Show with Mrs. Ralph and their two children, Sherry and Stewart. Says his boy Stewart was big help in making selections but Sherry held him down as she was too critical.

• • •

Freda and Al Acker, Cynwood, Pa. also were visitors at Lamp Show and spent a whole week in New York. Wendy Acker, their daughter has been admitted to Bryn Mawr College where she will go this fall. Dennis Acker, their son took over business while they were away and did a good job. Kept in touch with the folks daily by phone. Nice to have a son to take over while Mom and Pop go away.

• • •

Herman Lebersfeld, son of Mr. & Mrs. Arthur Lebersfeld, Capitol Lighting, East Orange, N. J. who recently returned from honeymoon, and then did two weeks stretch with Army Reserve, has just been made executive vice president of Capital and has assumed active duty there.

• • •

Dick Orth for many years associated with Gill Glass of Philadelphia, is now with Gillinder & Son of Port Jervis, N. Y.

• • •

As usual Leviton Mfg. & Circle F had hospitality suites at recent New York Lamp Show. Who should know better than I. I visited both.

• • •

"Brigitte Bardot isn't worth thirty cents" yelled students outside a movie house, which is one reason why they are still students.

• • •

Read LIGHTING for all the news.

• • •

Have you noticed "Geri" turned around in last issue of LIGHTING. Some Gal and can take a hint.

Here, There and Everywhere (Continued)

Date has been set for 1961 Lighting Fixture Show at New York Coliseum. Starts on March 5th.

• • •

Fred; Did you sneak in okay last night? Ted; Just as I was about to crawl into bed my wife woke up and said, "Is that you Fido?. Well for once I had real presence of mind. I licked her hand.

• • •

Letter from Len Simon of Chicago who has moved his office into suburban—Northfield, Ill., new office building and only a few feet from one of the main highways. Len represents Artolier and Atlas in Chicago area.

• • •

Mr. & Mrs. Al Feldman, Feldman Lighting, Paterson, N. J. celebrated their 40th wedding anniversary on June 20th with a family dinner. Al says he really lit a cigar for the occasion and for those who know him, this is a rarity, as he usually goes around with an unlit cigar.

• • •

Judy Marx, daughter of Helen and the late Jim Krieger, founder of this paper, gave birth to a boy last month. He is being named James A. Marx in memory of his late grandfather.

• • •

Jerome Wolfe "Jerry" now president of Wolta Electrical Products and owns all the stock in that company, having acquired the interest of S. J. Watsley.

• • •

Had lunch with Charlie Weinreb of Boston on his recent visit to New York. Charlie is big boss of Mass. Gas. Electric Supply Co. Jasan Weinreb—Note.

• • •

Swiss Harmony of Chicago, manufacturers of Beacon revolving lights, have announced price reductions on some of their items.

• • •

Our Monthly "News Letter" the green sheet, always contains some interesting items and should be read thoroughly by all our readers.

• • •

Did you notice Progress ad with the dame sitting on a hot stove? She is advertising the new Progress Electronic Range Hood and not bad looking, I mean the Hood of course—the dame isn't bad to look at either.

• • •

Have you noticed the New Vigor at Virden?

• • •

Some people will work night and day just to buy a Labor-Saving appliance.

• • •

Electric Supply Co., High Point, N. C., celebrated opening of their new showrooms in June 28th. This was an invitation party for architects, engineers and contractors and a large attendance was had. Their regular opening for the public in general was held at a later date. This showroom without a doubt is one of the finest in that section of the country and we wish them luck.

• • •

Sandy Winslow, Centre Lighting, spent a week in St. Joseph's Hospital, Atlanta, Ga., in July with a very unusual condition. Sandy is going to bend many an ear about this experience.

• • •

Faries Light with Universal Clamp for Mounting Anywhere Introduced by Fostoria Corporation

A Faries light featuring a felted universal clamp that opens ¾" for quick mounting on pianos, music stands, bulletin boards, picture frames, or wherever easily mounted illumination is required has been introduced by Fostoria Corporation, manufacturers of Faries lamps. The new light features a patented 6½" snap on shade that can be rotated for spot illumination as desired. The Faries universal clamp light is offered in handsome statuary bronze finish. For more information, write Fostoria Corporation, 1200 North Main Street, Department 71, Fostoria, Ohio.

"The polished brass Pull Down on the left is No. 699. It is 16" in diameter and features a striking multi-colored stained glass shade. The 3-way bottom turn switch controls a 50-100-150 W bulb. It is also available chain hung. No. 779 on the right is the same except for glass bottom diffuser. Both beauties retail for about $54.00."

THE LINE DESIGNED WITH YOU IN MIND

GERINGER

LIGHTING

GERINGER & SONS MFG. CORP.

Factory & Offices: Peekskill, New York

ASK YOUR GERINGER REPRESENTATIVE FOR YOUR SET OF GERINGER GALS

An Invitation from SHELDON

the foremost manufacturer of Quality Lighting Components

Specialists in Designing
Stamping
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Finishing

We at Sheldon are extending our facilities (the largest in the industry) to you, the manufacturer. We understand and recognize some of the problems you face. And as any progressive business we try to anticipate your needs . . . one of those is the opportunity to see *your* ideas come to life.

Our new policy is to take your drawing or blueprint and create an actual piece . . . or to sit down and talk with you about a particular design you have in mind—or perhaps you're interested in one of our designs. Whichever way—Sheldon will prepare one, two or ten pieces, depending on your needs. All this and more, Sheldon will gladly do. At Sheldon . . . "Selling Designs" of the finest quality are produced at the most competitive prices.

If you have a special job . . . try us and see.

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METAL PRODUCTS CO., INC.
18 Martine St., Fall River, Mass. —Tel. OSborne 8-8358
REPRESENTATIVES:

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Richard Craven	Richard J. Sanders	Sil-Glo Sales Co.	Al Wasserman
Los Angeles	Chicago, Ill.	Jackson Heights	Philadelphia
RI 9-9908	DE 7-6268	IL 8-4574	WA 7-0637

G.E. Adds New, Stronger Base to Common Incandescent Light Bulbs

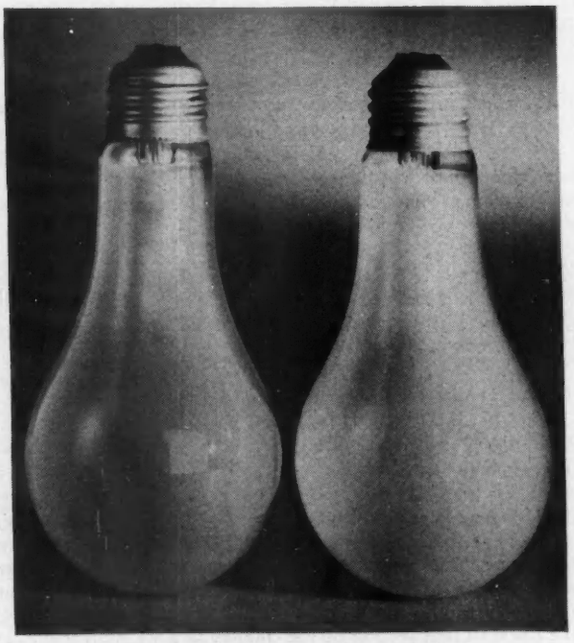
A new aluminum base for the most popular types of household, incandescent light bulbs was described here today as greatly increasing the base strength by Robert V. Corning, Manager of Marketing for the General Electric Company's Large Lamp Department.

The new base will be on all of G. E.'s standard medium-screw incandescent light bulbs by this fall. Its increased strength makes less likely the possibility of damage in handling, storage or "strongarm" installation that might otherwise crush portions of the base and cause immediate bulb failure.

"The result is improved convenience features for household users and maintenance labor cost savings for commercial and industrial users," Corning said.

The base is made more crush resistant by a more straight-line design of the base end in contrast to the older rounded design. This change is said to more than double the pressure a base can take before crushing, breaking the inside exhaust tube and thus causing bulb failure.

In addition, a mechanical gripping feature has been added to the use of chemical adhesives to cement the base to the glass bulb. Dimples on the glass bulb hold the case even though the cement may have deteriorated from heat during the burning of the bulb. "This is particularly important when higher wattage bulbs are operated in smaller fixtures," Carning said.



CAN YOU SEE THE DIFFERENCE?

Common but unordinary light bulbs have undergone a change at General Electric although it's difficult to see. The new General Electric light bulb at the right has a newly developed aluminum base design and a mechanical gripping to the glass bulb. Net result is that the new bulb base is much less prone to give under pressure of "strongarm" installation which could make the bulb burn out immediately and is less subject to damage in handling or storage. In addition, the new mechanical gripping reduces the possibility that the bulb might part from the base when replacing burned-out bulbs after operation under overheated conditions.

Corning Introduces New Lens

A new commercial lighting lens optically engineered to provide soft even light between fixtures has been introduced by Corning Glass Works. The lens is 10⅞" square with convex contour. Offered for all types of commercial lighting, including offices, schools, hotels and hospitals, the lens is particularly adapted to illuminate open areas.

New Shallow-Line Troffers

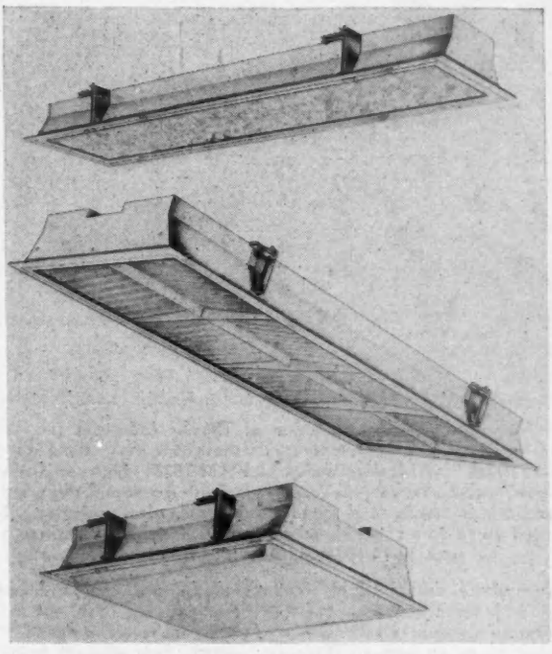
A new line of recessed fluorescent troffers called Shallow Line, featuring a wide variety of diffusing elements and an over-all depth of only 4⅞", is introduced by the Benjamin Division of Thomas Industries Inc., Louisville, Ky.

The Shallow Line troffers are designed to provide greater structural freedom between floors by allowing plenum depth to be reduced. Moreover, overhead yokes have been eliminated in favor of a rapid-installing swivel-bar mechanism. Housings are fabricated and wired in a one-piece unit.

Other important features of the new troffers include one-piece diffusing elements (up to 8 sq. ft. of glass, lens or louver) unmarred by cross members and support bars. Hinging also has been simplified, eliminating screws. An exclusive "tab-lock" latch which travels less than ¾ of an inch along the frame, provides permanent, rattle-free fastening.

The Shallow Line troffers are available for all popular ceiling types. The 14 basic types of shielding elements include Benjamin L-120 Lens, Corning #70, Holophane Prismalume, Owens-Corning Fiberglas, ½" x ½" Polystyrene or aluminum louvers, a new drop-dish acrylic panel and parabolic low brightness aluminum.

For further information on the new Benjamin Shallow Line troffers, write to: Benjamin Division, Thomas Industries Inc., 207 E. Broadway, Louisville, Ky.



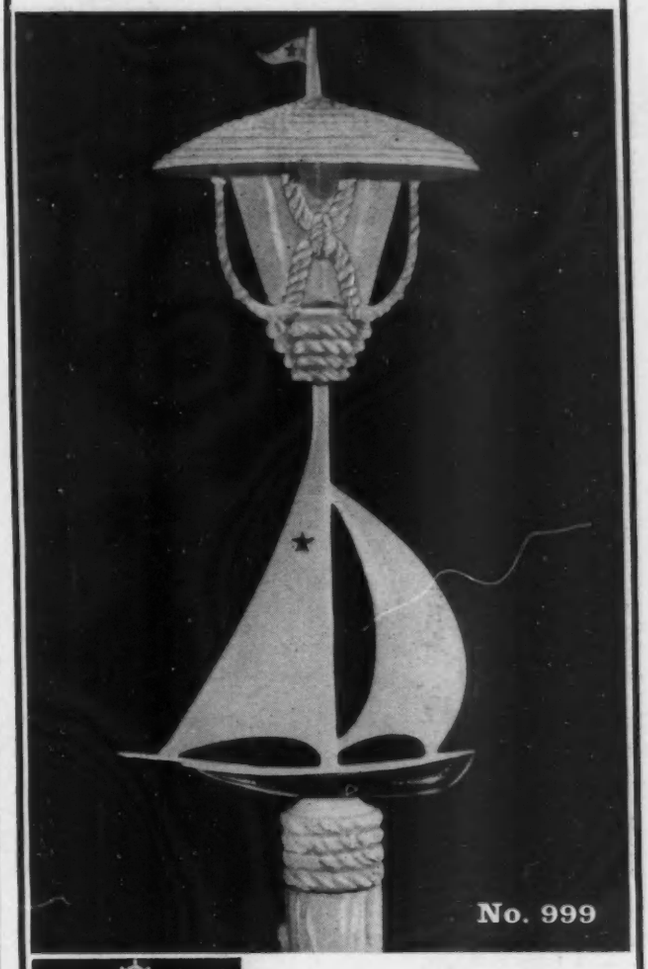
The new Shallow Line recessed troffer announced by the Benjamin Division of Thomas Industries Inc., Louisville, Ky., features a wide variety of diffusing elements and an overall depth of only 4⅞". Pictured above are three of the new units: Top—1' x 4', (with new Owens Corning Fiberglas). Center—2' x 4' (with Holophane Prismalume). Bottom—2' x 2' (with new drop-dish acrylic panel).

Sheldon Metals Assigns New Chicago Representative

Mr. Irving Puhn, President of Sheldon Metal Products Co., Inc., Fall River, Mass. announced the appointment of Richard J. Sanders as the Chicago Representative. Mr. Sanders can be contacted at 430 West Erie St., Chicago 10, Ill., Telephone DE 7-6268.

Frank Dini Imports

For something new and completely different, **LOOK** for our coming series of ads!



Startling beauty with Nautical Trend!

The answer to decorators quests for something new and unusual.

Hand casted aluminum. Made in Italy, designed and originated by Frank Dini.

Write for our new miniature catalog.

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ROUTE 17, LODI, N. J.
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DUALITE No. 44-G
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The Last Word In Modern Lighting!

DUALITE
WITH IMPROVED GLARE-FREE
Combination Lighting

The last word in exacting lighting, featuring Acme's advance-design reflector with both fluorescent and incandescent lamps. Ventilating louvers in the double-wall reflector hood supply effective air cooling. Uses the full power of both light sources to give better, more useful illumination with a most uniform light distribution curve. 3-way switch permits fluorescent or incandescent lamps to be used individually or in combination.

DUALITE No. 88
With Flexible Gooseneck

OVER 30 FAST SELLING MODELS
READY FOR IMMEDIATE *DELIVERY*

•

WRITE FOR NEW CATALOG

Acme

ACME LITE PRODUCTS CO., INC.
Congers, New York

New Thomas Literature

The Moe Light division of Thomas Industries Inc., Louisville, Ky., has introduced a four-page brochure describing its new and complete lines of Slimline and Strip Line fluorescent lighting fixtures.

The new Slimline fixtures represent the combined engineering of Moe Light and Benjamin divisions of Thomas Industries.

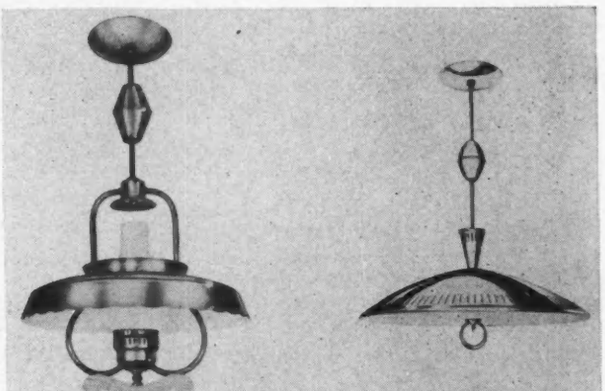
All the new units are of heavy gauge steel construction roll-formed to insure maximum rigidity and feature a baked enamel finish. All are equipped with quality ballasts and sockets and channels are grooved for quick installation of the new Moe Light sliding hanger or spacer.

The new one-light Slimline units and two, three and four-light parallel units come in 28-inch, 72-inch and 96-inch lengths and tandem models. All two-light units are available with either tombstone or turret sockets.

The Strip Light line features removable end caps which may be used as coupling for end-to-end mounting and ample knockouts and mounting holes for easy installation. There is a wide variety of strip lengths, from 19 to 49 inches, to accommodate any distance desired.

Also featured in the brochure is Moe Light's new all-level dimmer for either fluorescent or incandescent installations. The dimmer gives any desired degree of brightness and is of a transformer type, rather than a resistor, so that only current actually needed is consumed.

A free Strip Lighting catalog can be obtained from the Advertising Dept., Moe Light division of Thomas Industries Inc., 207 E. Broadway, Louisville 2, Ky.



New from the Moe Light Division of Thomas Industries Inc.—Traditional contrasts with contemporary in these two new Moe Light pull-downs. Traditional western design, left (M-1520), features distinctive "ox-bow" of weathered pine in antique finish, scalloped edge antique brass 16-inch shade and hand-blown opal glass chimney. Easily adjusted 26 to 56 inches. Three-way switch. Finished in antique brass, one 30-70-100-watt bulb is recommended.

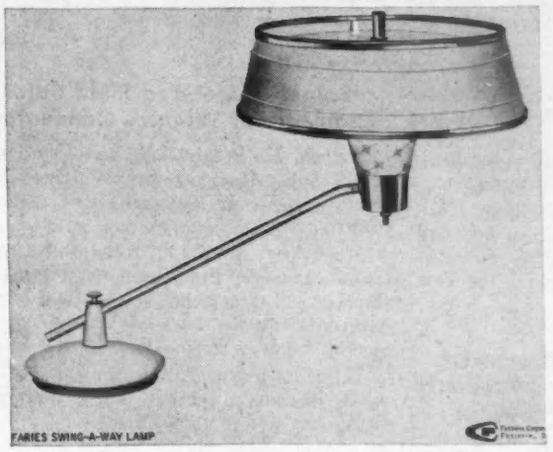
Contemporary design, right, features shade, urn, reel and canopy finished in polished copper (M-1529-2) or polished brass (M-1529-1) with white ceramic glass diffuser. Full 20 inches in diameter. Adjustable 19 to 48 inches. Three-way switch. Four 60-watt bulbs are recommended.

New Non-Interchangeable Enclosure

On July 1, 1960, the new N. E. C. Code becomes mandatory for the use of Non-interchangeable breakers. Wadsworth's new 200 Ampere Fusible Main has provisions for 24-32 or 40 circuits. For over one year the "E-Z-Red" Non-interchangeable breaker has been in use and has proven acceptability throughout the country. This new device was designed to control the following: Electric Heat, Hot Water, Cooling, Range, Oven, Washer, Dryer, Refrigerator, Freezer, Dishwasher, Disposer, Radio, besides the smaller appliances such as toasters, mixers, indoor and outdoor lighting, etc.

Wadsworth's new 200 Ampere Fusible Main with provisions for breaker branch circuits will fit between studs set 16" on center. It is for 3-wire service, solid neutral, 120/240 volts A. C. The cabinet is available in either surface or flush mounting with deadfront construction also for indoor and raintight installations. It is listed by Underwriters Laboratories.

New Smartly-Styled, Glare-Free Faries Swing-a-Way Lamps Announced by Fostoria Corporation



An extremely attractive, smartly-styled line of Faries lamps known as the Swing-A-Way has been announced by Fostoria Corporation, manufacturer of the well-known Faries lamps. The new Swing-A-Way lamps feature handsome plastic diffusers tastefully accented with gold net fabric. Diffusers soften light and eliminate glare. Arms and cups of the new lamps are finished in beautiful polished non-tarnishing brass. Shades and bases are finished in desert sand, a neutral color that harmonizes with any decor. In addition to smart styling and glare-free lighting, the new Faires Swing-A-Way lamp offers maximum flexibility in positioning. Shades can be swung in a complete circle and on some models length of arm can be adjusted as desired. Bases are fully weighted and padded to avoid accidents and damage to lamp or furniture. The attractive new Swing-A-Way lamps accommodate a 75 watt or the new 100 watt bulb (not included). For more information, write Fostoria Corporation, 1200 N. Main Street, Dept. 75, Fostoria, Ohio.

Duro-Test Develops Improved Fluorescent Lamp

A new development in the manufacture of fluorescent lamps was announced today by Duro-Test Corporation, the nation's fourth largest manufacturer of incandescent and fluorescent lamps and electronic equipment.

Duro-Test, following a program of intensive research combined with advances in manufacturing techniques, developed Permion #18, a major breakthrough in cathode emission coatings and the chief factor behind the cleanest fluorescents the company has ever made.

The emission coating on the cathode at each end of the lamp constitutes one of the unseen differences between a good lamp and a superior lamp. This emission material releases ions to form an electron stream from cathode to cathode, which, combined with mercury-argon gas and fluorescent phosphors causes the lamp to produce light.

Permion #18 prevents the chipping away at cathode emission coatings that cause the spotting and darkening at the ends of the tube.

The new development virtually eliminates sputtering, the major cause of spotting, darkening and end-banding. Permion #18 controls the ions in the path of the discharge stream and sets up a police action that prevents the ions from leaving the electron stream and smudging the lamp walls. The result is a remarkable degree of end-to-end cleanliness throughout the long 17,000 user-hours life of Duro-Test fluorescents.

* * *

The Northern California Electrical Bureau has taken a unique step forward in the field of wiring adequacy standards. And, an important step has been made toward making them a requirement for medallions issued to multi-family units.

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INDOOR LANTERNS
by JAY
...an old fashion that is forever new!

Cast brass and wheel cut glass panels are skillfully combined to achieve new beauty for the functional hall and foyer fixture. These are hand-rubbed to an antique finish. Immediate deliveries.

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frosted
glass

J 039
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JAY LIGHTING MFG. CO., Inc.
New Showrooms: 5 East 35th Street, New York 16

Creators of the luxurious hand-crafted Coronet Series—the resplendent Parasol Series—the unusual brass and walnut Anzac Group—the distinctive torch-type Concord Series—Roundabouts—and VISORlite, the dramatic wall lighting sensation.

DISTRIBUTORS IN PRINCIPAL CITIES

Personnel News

Gries Reproducer Appoints R. E. Anderson

Gries Reproducer Corporation, New Rochelle, N. Y., has announced the appointment of R. E. Anderson, 3418 E. Lake Street, Minneapolis 6, Minn., as exclusive GRC sales representative to the original equipment market in Minnesota, North and South Dakota, and western Wisconsin.

According to Joseph Saks, Gries' Director of Sales, Mr. Anderson will market GRC stock components, as well as tiny die castings and plastic moldings made on contract. GRC stock components include a complete line of die cast zinc alloy and molded nylon fasteners, electrical, electronic, hardware and appliance parts, and many "off-the-shelf" industrial and commercial stock parts.

In addition to producing contract and stock parts, Gries Reproducer offers original equipment manufacturers the added convenience and design flexibility of variations in stock items. This is achieved through the unique Gries technique in automatic, high speed die casting and molding.

Joins Western Lighting Corp.

Don Glass has joined Western Lighting Corp. of Los Angeles as a sales engineer. He has a wide knowledge and many friends in the electrical industry. He was associated with Graybar for many years, and more recently with a large lighting manufacturer.

Day Brite Houston Representative

Joe W. Hale has joined the field sales staff of Day-Brite Lighting, Inc., as the firm's representative in the Houston, Texas area. Hale is located at 7042 Sharpcrest Avenue in Houston. He replaces N. O. Reed, who recently retired from Day-Brite.

Hale has had extensive experience in the wholesale lighting field. Most recently he was District Lamp & Lighting Specialist for General Electric Supply Company in Houston. For many years he was a salesman for Graybar Electric Company in Austin, Texas, and at one time he managed an independent electric supply house there.

Appointed Sales Administrator

Harold E. Hanna has been appointed sales administrator and customer relations officer of the Light & Power Utilities Corporation, Olive Branch, Mississippi. The new office is intended to increase efficiency and speed in handling orders for the lighting fixture manufacturer.

Hanna will be in charge of liaison between L & P customers in 38 states and the Light & Power sales headquarters. As director of customer service, he will also handle quotations and work closely with the company's sales representatives throughout the country.

A native of Van Buren, Arkansas, Hanna joined the Little Rock office of the Graybar Electric Company after World War II. He rose to operating manager of that office before leaving in 1956 to help organize the Central Electric Supply Company in Pine Bluff, Arkansas, an electrical distribution firm. He resigned as secretary-treasurer of the firm to take the new position.

T. H. Cashin Named Marketing Manager — Large Lamp Products Sylvania Lighting Products

The appointment of Thomas H. Cashin as Marketing Manager — Large Lamp Products of Sylvania Lighting Products, a division of Sylvania Electric Products Inc., has been announced by Garlan Morse, Vice President & General Manager — Large Lamp Products. Sylvania is a subsidiary of General Telephone & Electronics Corporation.

Mr. Cashin's new assignment includes supervision of marketing activities and the coordination of sales programing and product sales management for such products as incandescent and fluorescent lamps, mercury lamps, and other commercial and industrial lighting products.

Halo Appoints New Salesman, 6 Representatives

John Morgan has been appointed a salesman in the Chicago area for Halo Lighting Products, Inc., manufacturers of recessed lighting fixtures. He is a graduate of Memphis State College and held a sales position with Presto Appliances before joining Halo.

Robert S. Fremont, president of Halo, also announced the addition of six new American and Canadian representatives for the firm's products.

They are: William Johnson, Memphis, Tenn.; Manufacturers Products, Inc., Winnepeg, Manitoba; Meany, O'Connell and Millerick, Cambridge, Mass.; Michael Meshwork, Montreal, Quebec; Al Rosenstock and Son, Kansas City, Kan., and Roland Schillicutt, Little Rock, Ark.

Bill Stern Joins Lighting Services Inc.

Marvin Dworkin, Vice-President in charge of the display division of Lighting Services, Inc., National sales agent for Northcraft Display Lighting, announces the appointment of Bill Stern, formerly with Bendix Aviation, as Metropolitan-N. Y. Sales Engineer.

Mr. Stern will call on display directors and department stores exclusively to fill the gap between the displayman's needs and the display lighting manufacturer's desire to fill these needs quickly and efficiently.

The Display Division of Lighting Services, Inc. specializes in all phases of store lighting design.

Bolger Appointed Field Sales Engineer for Wiggins Connectors

Joseph F. Bolger has been appointed Field Sales Engineer for Wiggins Connectors; 3424 E. Olympic Blvd., L. A., Calif.

According to F. H. Campbell, Field Sales Manager, Bolger will be located in Marblehead, Massachusetts, and will be responsible for the sales of Wiggins products in the New England area.

Wiggins manufactures quick connect, quick disconnect connectors for fluid and electronic system applications.

Product Engineering Supervisor

Jack E. Mounteer has been named supervisor of lamp product engineering in the Electrical Products Division of Corning Glass Works.

Since 1957 he has been the southern California sales engineer for the division's Electronic Components Department. His new position has been left vacant by a resignation.

Mounteer will be responsible for engineering and development of new and standard glass products for the incandescent, fluorescent, photoflash and mercury vapor lamp industry. His office will be in Corning, N. Y.

Willard Gilbert Sawyer Dies

Willard Gilbert Sawyer, former president of the John C. Virden Company, died June 19 at his home in Atherton, California. He had lived in California the last five years. He was born in Birmingham, Alabama, 60 years ago and spent most of his life in Cleveland.

Mr. Sawyer was a graduate of University School and Dartmouth College. He joined the Virden Company after completion of his education in 1924, serving in all capacities throughout the Company.

He was one of the early leaders in the Lighting Equipment Manufacturers Association, and an original founder of the present American Home Lighting Institute.

Mr. Sawyer is survived by his wife, the former Rose Brynd, whom he married in 1950; three daughters, Mrs. Bruce Woodd, Palo Alto, California, Mrs. Warren Wattles, Shaker Heights; and Miss Janet Sawyer, Mountain View, California; two grand children; a brother, Charles Wilton Sawyer; and two sisters, Mrs. John L. McChord and Mrs. George M. Donihi.

Services and burial were in Palo Alto, California.

Revolutionary New Method to Check Screw Thread Pitch Diameter

All text books and standards publications recommend the fundamentally sound 3-wire method for a true measurement of pitch diameter as a single element.

The O-VEE gage together with any standard hand micrometer enables the user to determine the actual size of a screw thread and whether it is within tolerance, without any reference to table or calculations.

This new measuring gage consists of a coil spring mounted on a data plate. Inserting the gage on the thread is done by depressing the lever thus expanding the coil. Measurements are taken with an ordinary micrometer over the coils and then checked with limits printed on data plate. No calculations or tables are required. The O-VEE gages come either in single units or in sets.

They are available in standard sizes from #5 to 1", all series, all classes of fit.

Special sizes are also obtainable in sizes from ⅛" up to and including 5".

The O-VEE Screw Thread Comparator brings the accuracy of the Wire Method of screw thread measurement right down to absolute simplicity, recording the variation of Pitch diameter with rapid precision on the clear easy-to-read indicator scale equipped with tolerance pointers. The rugged construction and clean lines make it suitable for use by skilled or unskilled labor, means being provided for sealing all adjustments.

The Measuring elements of the instruments are pairs of helical springs of the correct size wire to suit the thread being measured. Each pair of springs are housed in a container clearly marked with the pitch of the screw for which they are intended. Printed on the container are Constant dimensions for American (A.N.), Whitworth (B.S.W.), and Cycle (B.S.C.) threads, enabling the user to measure any size screw; standard or non-standard, including the new Unified Screw threads, within the capacity of the instrument.

There is no need for costly setting plug gauges, as setting is accomplished by means of gauge blocks, but if these are not available, a piece of steel turned to correct diameter. The value of the setting blocks can be easily determined by subtracting the Thread Constant from the Nominal Major Diameter.

The O-VEE Comparator has been tested and approved by the National Bureau of Standards and is being used by leading Engineering, Aircraft and Government Plants throughout the Country. Accuracy of the instrument is well within gauge tolerances, so providing precision measurement and speedy operation at low cost.

The O-VEE Screw Thread Comparator is available in 3 models, ranging from ⅛" to 1¼"; 1" to 2¼" and ⅛" to 1¼" with simplified backstop. Standard coils from 8 to 44 T.P.I. as well as left hand and specials to be used with the comparators are available from stock.

For complete illustrated folder and price list, write to Scherr-Tumico, 200 Lafayette Street, New York 12, N. Y.

New General Electric Cable Insulation Affords Improved Low Loss Characteristics

Developed by the company's Insulating Materials Department, the varnished polyester-glass cable tape (designated No. 76554) is designed specifically for laminated cable constructions.

Tests at the department's Insulation Application Center, Schenectady, N. Y., have shown that at 100 degrees Centigrade the new tape's power factor rises to only approximately one-third that of conventional varnished cambric.

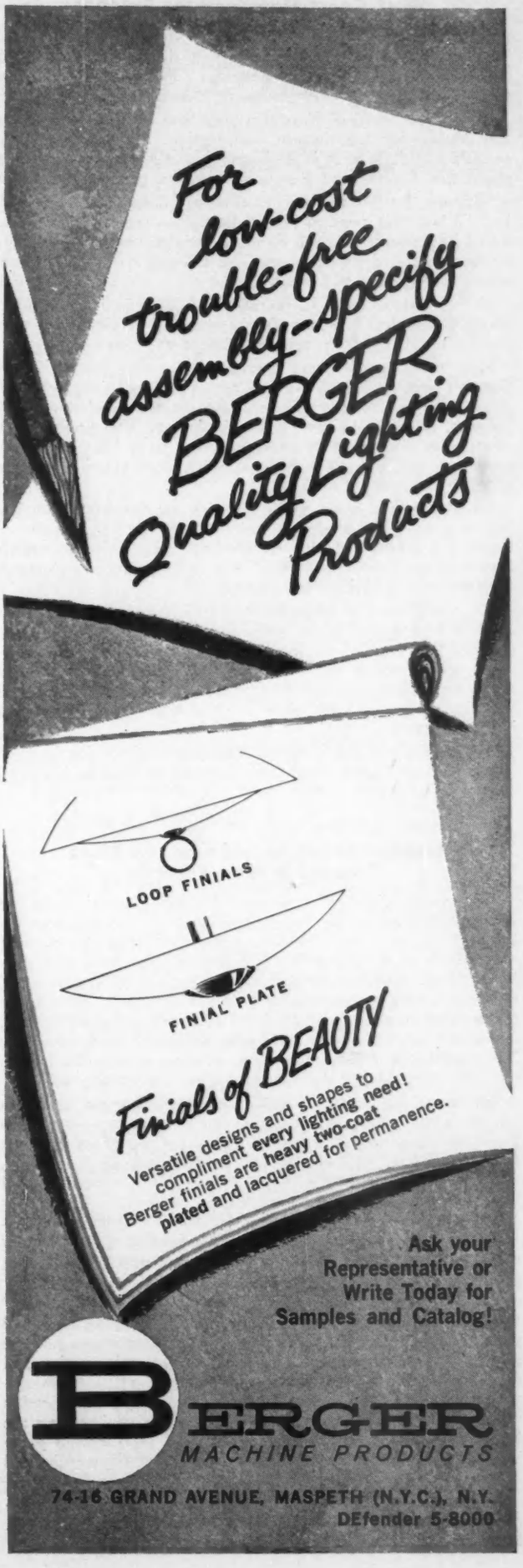
The straight weave tape also provides increased flexibility, engineers said. Slippage allowed by a high oil content eliminates need for a slipper compound in most cases.

Tests also have shown the insulation's dielectric strength to be unimpaired by stretch. In fact, under normal application stretch, dielectric strength actually increases. As a result, construction thickness can be up to 20 per cent less than that required with varnished cambric, engineers said.

High resistance to moisture maintains the insulation's dielectric strength under high humidity, engineers pointed out, and also reduces cold-weather stiffness, preserving the tape's flexibility.

Comparable to cambric in its ability to withstand assembly punishment, the new tape can be used in all cable taping machines.

Write GE, Schenectady 5, N. Y.


For low-cost trouble-free assembly-specify BERGER Quality Lighting Products
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Versatile designs and shapes to compliment every lighting need! Berger finials are heavy two-coat plated and lacquered for permanence.
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West Coast Manufacturer Expands Distribution

Lightcraft of California, the largest lighting manufacturing company on the west coast, announces they are now expanding their distribution to cover the entire United States.

During the fourteen years that they have been manufacturing and distributing for western consumption, Lightcraft of California has led the field in designing and manufacturing original residential fixtures and lamps covering all periods and styles.

"Eastern demand for our 'California influenced' designs during the last year resulted in the decision to set up full national distribution operations with complete sales representation already in the process of establishment," said Lightcraft of California salesmanager, Bernard Gottlieb.

He pointed out that Lightcraft of California is a self-contained independent company that designs and fabricates all their fixtures and lamps from raw materials in their own plant.

Most recent appointment announced by Mr. Gottlieb is the Samco Company, 325 N. Wells Street, Chicago, Illinois who will represent them in the midwest. Samco staff includes Many Johnson, Mitchell Weisner, Allex Gordon and Ron Anderson. In addition to Samco, other representatives have been previously appointed and additional regional sales representation will be added in the near future.

An 80-page, full-color catalog showing the company's complete line is now being produced with advance copies available to qualified distributors. Interested distributors are invited to contact Lightcraft of California, 1600 W. Slauson Avenue, Los Angeles, California for additional information.

The appointment of Gene Wilson as Lightcraft of California's resident representative for Oregon and Washington was announced this month by salesmanager, Bernard Gottlieb. Permanent regional offices will be established within the next thirty days. Mr. Wilson has had many years experience in the residential lighting field and should be of great help to the distributors in the northwest.

Ray Mikels, who previously travelled this territory for fourteen years, will now concentrate his efforts exclusively in Northern California.

Lighting for Parking Areas and Ships Covered in New Reports

Two newly-published recommended lighting practices by the Illuminating Engineering Society, international professional lighting organization, cover widely divergent areas; ships and parking areas. Both of these practices are new and not previously published. They contribute substantially to the increasing number of guides published by the Society to assist architects, lighting engineers and specialists, and others in achieving improved lighting. These two newest reports by I.E.S. Technical Committees are based upon new I.E.S. recommended levels of illumination, in many instances higher than those in effect for many years.

"Recommended Practice for Marine Lighting" prescribes lighting for larger passenger and cargo vessels from shaft-alley to the top of the stack, excluding signals. All of the special areas unique to luxury liners, such as theaters, gymnasiums, shops, etc., receive specific treatment, as well as the salons, staterooms, and other passenger and crew compartments common to all seagoing ships. Lighting for engine rooms, galleys and working areas is fully specified. The special lighting needs relating to the "floating community" character of larger vessels is covered in detail in the introduction. Thirteen pages with cover.

"Recommended Practice for Outdoor Parking Area Lighting" was prepared in collaboratior between the Store lighting and Roadway Lighting committees to meet the requirements of both groups. Types of outdoor lighting equipment, pole spacing and mounting heights, are all described in detail as are the basic considerations in this type of lighting problem. Minimum illumination requirements, color, economics and recommended maintenance are included. Two full pages of photographs of typical outdoor parking area lighting jobs show existing applications. Eight pages and cover.

Both publications are available from Publications Office, Illuminating Engineering Society, 1860 Broadway, New York 23, N. Y. Each 50c per copy. Quantity prices on request.

All-New Flip Chart Heating Training Course Offered by EEI

"Comfortable Electric Warmth—For The Entire Home" is the title of Edison Electric Institute's all-new flip chart sales training course on home electric heating. The course, considered to be the most comprehensive one of its kind yet devised, is now ready for distribution to electric utility companies and trade allies.

The charts which make up the course are designed as an information course for utility employees, architects, contractors, etc., and as a sales training course for all who sell electric heating. Electric utility companies will find the course extremely helpful in their employee training programs and sales training programs.

Comfortable Electric Warmth is a comprehensive study of the many benefits of electric home heating and was created to suggest ideas and ways to sell electric heating. The course emphasizes ductless-type electric heating and is non-technical in its approach.

The Home Heating Program comes in three forms: (1) Complete Electric Heating Sales Training and Information Course, $75; (2) Electric Heating Information Portion Only, $50; (3) Combination of Electric Heating and Appliance Sales Training Courses, $149.50.

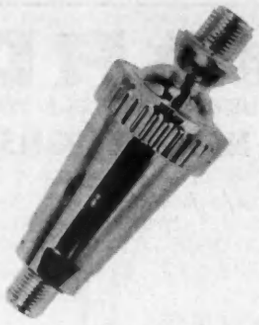
An illustrative brochure describing the courses and what comes with each is available by writing to Sales Division, Edison Electric Institute, 750 Third Avenue, New York 17, New York.

"Lanterama" Promotion by Del-Val

With their move into their new plant completed and production in full swing, Del-Val Manufacturing Company has put into operation a "Lanterama" Promotion which introduces a new series of traditional lanterns. The many economies and cost cutting production features which have resulted from plant modernization have enabled Del-Val to produce the finest line of coach lanterns so as to be within the reach of the volume market.

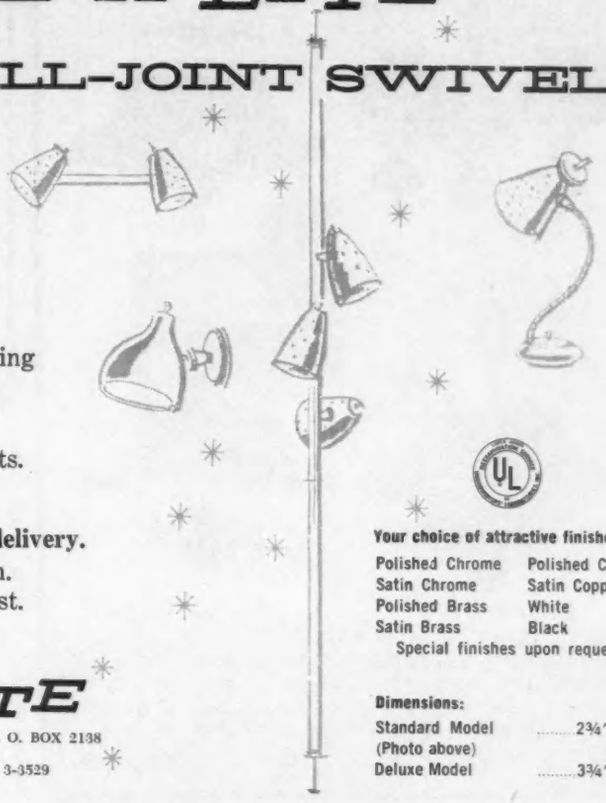
In addition to providing increased sales potential and passing on the savings accruing from plant modernization, Del-Val is offering other important incentives to representatives and distributors during the "Lanterama" Promotion. Also, new, handsome, colorful brochures describing the new series of coach lanterns being introduced are available with dealer's name, address, etc., imprinted. Free copies may be obtained by writing Del-Val Manufacturing Co., 519 W. Huntingdon Street, Philadelphia 33, Pa.

Increased production capacity, also a result of Del-Val's move to newer and larger quarters, makes it possible for Del-Val to offer a few choice territories with the assurance that immediate delivery will be made on all orders.



SIDE A LITE

NEW BALL-JOINT SWIVEL



The answer to your swivel Problems!

For smoother tension... stronger gripping power... extra durability... This modern design offers you the following features: Large non-wearing nylon bearing. Attractive streamlined design. Positive adjustment in any direction. Quick, easy assembly. Straight, push-thru wiring. Interchangeable components. Also available in hand-adjusted model.

In addition, SIDE A LITE gives you prompt, on-time delivery. Phone or write for price list and additional information. Samples will be furnished to qualified users upon request.

Your choice of attractive finishes:

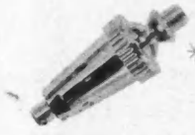
Polished Chrome	Polished Copper
Satin Chrome	Satin Copper
Polished Brass	White
Satin Brass	Black

Special finishes upon request.

Dimensions:

Standard Model (Photo above) ..... 2¾" x 1"

Deluxe Model ..... 3¾" x 1"



SIDE A LITE

DEPT. L2 2125 LEMON AVENUE, P. O. BOX 2138

ALHAMBRA, CALIFORNIA CUMBERLAND 3-3529

Light Brings Life to a Tired Room

Simple prescription for a tired room: light.

Light, properly used, can bring a sparkling glow to a room that was dingy with unplanned dimness, or it can soothe feverish brilliance when a quiet and restful mood is wanted.

Forty magic ways to beautify a home with light are shown in "The Light Side of Decorating," a new booklet just published by The Superior Electric Company, makers of Luxtrol light controls. Included are at least four lighting schemes for every typical room and all were designed by C. Eugene Stephenson, F.A.I.D. internationally known designer and authority on home lighting.

The 36-page booklet contains forty full color illustrations of well lighted rooms. Each is keyed to wiring diagrams and installation sketches that help the homemaker and her electrician choose the right fixtures and light sources to make her lighting completely functional and decorative. A directory shows how to install or build such lighting devices as valances, brackets, coves, etc., and how to select the proper light bulbs.

All lighting shown in "The Light Side of Decorating" can be made as bright or dim as desired with Luxtrol light control, a device that takes the place of an on-off switch and makes it possible to adjust light from off to full bright or any level in between.

Copies of the book are available from local electric utility companies, electric distributors or directly from The Superior Electric Company, Bristol, Conn., at 25c per copy.

New Booklet

"DISPLAY-FLEX"—New 8-pp. booklet describes flexographic printing. Illustrations show versatile display materials in rolls, produced by this process, to make inexpensive window and store spectaculars, wrap-arounds, background displays, etc. Obtainable by writing Fuller Displays Inc., 5-39 48th Avenue, Long Island City 1, N. Y.

New Bulletin Provides Technical Data on LPI's Trend Series Luminaires

Complete application and technical data on new Trend Series luminaires for schools and offices is contained in a bulletin now available from Lighting Products, Inc., Highland Park, Illinois.

The new bulletin provides photometric charts, dimensional data, ordering information and other descriptive and technical data on the Trend series. The luminaires are described as moderately priced, with attractive, completely luminous wrap-around side panels. The design provides comfortable, high-level illumination. Models for two, three, or four 430ma rapid-start lamps are available, with choice of three diffusers: clear ventrolens, white ventrolens, or polystyrene egg-crate louver.

Also shown on the bulletin is a chart depicting visual comfort of the Trend luminaire in accordance with the "scissor curve" method recommended by the Illuminating Engineering Society. The Trend Series Bulletin is available on request from Lighting Products Inc., Highland Park, Illinois.

"Name That Color" Contest Winner Announced at National Association of Display Industries Show

Thomas J. Meyer, Display Director of the Fandel Co. of St. Cloud, Minn. was named the winner of a nation wide "Name that color" contest among displaymen. The name for the new blend of straw and pink color filter that Northcraft Lighting Corp. has developed is "Toasted Pink". A one hundred dollar U. S. Saving Bond was mailed to Mr. Meyer for his winning selection.

"Toasted Pink" is the first of a new line of mixed color tones being developed for display lighting by Lighting Services Inc., consultants, designers and National sales agent for Northcraft Display Lighting.

NEW FIXTURES by BECKER

#203 Spd. 17"

#1850 Spd. 17"

#2300 Spd. 21½"

#2100 Spd. 21½"

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HOWARD

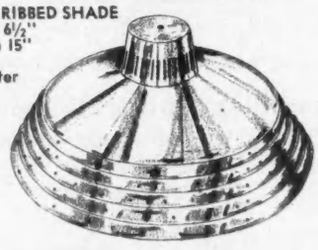
STAY AHEAD OF YOUR COMPETITORS WITH

HOWARD'S NEW DESIGNS

HR 150 RIBBED BULLET
Height 9½"
Opening 5¼"
Top 1¾"
Will take Louvre

HG 1128 HOUR GLASS
Height 13½"
Top opening 4½"
Bottom Opening 5¾"
Will take Louvre

DR 415 RIBBED SHADE
Height 6½"
Bottom 15"
Top Diameter 2¾"



HR 160 RIBBED BULLET
Height 8½"
Opening 5¼"
Top 1¾"
Will take Louvre

Samples and Catalogue upon request

Howard Metal Products Co., Inc.

92-26 180th St. Jamaica 32, N. Y. OLympia 7-8500

Improved Mercury Lamps, Price Cuts, Bring Lower Lighting Costs to Users

Sweeping improvements in performance and lower prices for its line of mercury lamps for industrial, floodlighting, and street-lighting applications have been announced here by the General Electric Company.

The performance improvements result from the extension to other mercury lamps, ranging in size from 100 to 1000 watts, major design changes G. E. recently introduced in its family of 400-watt "Bonus Line" lamps, according to Robert V. Corning, marketing manager for the Large Lamp Department.

Only three important types of the former mercury line will be continued, Corning said. They are the 400-watt clear, color-improved, and white lamps, prices of all of which have been reduced substantially.

The changeover in design will result in reductions in the cost of mercury light of about 25 per cent, depending upon the type of lamp employed, according to Corning.

Price reductions average about 8 per cent over the entire line. A few upward price adjustments are being made in low-demand types, he said.

An important benefit of the improved lamps is that they have twice the life of the old ones, yet maintain a high level of light throughout life.

A typical 175-watt street-lighting lamp of new construction, for example, gives 10 per cent more light than two of its predecessors over its useful lifetime. As a result, the user will gain a cost-of-light saving of $6 per socket per year, Corning declared.

In the industrial lighting field, a 1000-watt lamp of the improved type will give users a saving of more than 20 per cent in the cost of light.

Corning listed customer advantages of the improved lamps as follows:

1. Low price—as low or lower than present-design lamp prices in most cases;
2. Long life—12,000 hours, or twice the useful life of the old line (except 700 and 1000-watt sizes, which have a 50-per cent increase in life);
3. Better maintenance of light—more light at 12,000 hours than the old line at 6000 hours;
4. Low maintenance costs—less frequent replacements needed;
5. Weather-resistant glass—protects lamps against failure during exposure to weather and moisture;
6. Mechanical base—no cement to take out over long life;
7. Easier low-temperature starting—reduced voltage requirements; and
8. Improved rugged resistor—protects lamps against high temperature and high voltage.

Chief feature of the "Bonus Line" mercury lamp construction which causes improved performance, according to Corning, is a new cathode design. The larger cathode, double-wound and filled with a new electron-emissive material, prevents blackening of the arc tube as the lamp ages. Absence of the light-absorbing black deposits results in continuing high light output throughout lamp life, he pointed out.

Other features which insure maximum light output are a simplified mount structure of nine parts instead of 15, designed for the least light interception, and a protective disk with jeweler's finish which reflects light that might otherwise be trapped in the bulb neck and base.

Concurrently with its introduction of the "Bonus Line" of lamps as its standard mercury line, G. E. is inaugurating a simplified identification code, which will enable customers to order mercury lamps more easily.

Production of the new "Bonus Line" mercury lamps now is underway, Corning said, and they now are available nationally.

* * *

The 52nd Western Region Convention of the National Association of Electrical Distributors will be held October 18 through 21, 1960 at the Stardust Hotel, Las Vegas, Nevada. Convention theme is "Partners In Business." Idea behind theme is that "distribution" includes retail, wholesale and service industries.

Progress Introduces Hi-Hat Adaptor in "Easy-to-Buy" Display

To stimulate distributor and dealer sales of its unique Hi-Hat Adaptor, Progress Manufacturing Company offers the Hi-Hat Adaptor in an attractive and provocative 3-color point-of-purchase display. The display, which holds twelve individually boxed Hi-Hat Adaptors (No. P 8717) derives visual appeal from a large and attention-demanding display header. Pertinent artwork on the header and brief, informative copy capture and hold consumer attention. The sturdy, 3-color individual box details the few, simple directions involved in hi-hat conversion, completes the counter selling job.

The display is part of the shipping carton. Progress distributors order twelve Hi-Hat Adaptors, receive the 12-packed display in its corrugated shipping carton; re-ship to their customers the same way.

The Hi-Hat Adaptor is a totally new idea in home lighting technique, particularly suited for the "do-it-yourselfer". Old, no-longer-wanted hi-hat lighting fixtures may now be easily converted. This long-needed innovation, by Progress—world's largest manufacturer of residential lighting fixtures and related electrical products—permits the conversion of any 75W or 150W recessed hi-hat to any different style of fixture—literally in minutes. Removal of hi-hat is not necessary, nor are special tools or electrical changes.

Further information may be obtained from Progress Manufacturing Co., Philadelphia 34, Pa.

New fluorescent luminaire for schools and offices delivers comfortable, high-level illumination

Lighting Products Inc., Highland Park, Illinois, announces a new line of Trend Series fluorescent luminaires specially designed to provide high-level illumination for schools and offices, at recommended standards for visual comfort.

Unique design of the new luminaires includes attractive, completely luminous wrap-around side panels. Together with efficient diffusers, the design results in higher foot-candle levels than provided by conventional fixtures, with greater visual comfort. Brightness ratios closely approximate the Illuminating Engineering Society's "scissor curve" criteria for determining visual comfort.

A choice of three diffusers is offered with LPI's Trend Series luminaires: clear ventrolens, white ventrolens, and a polystyrene egg-crate louver providing 55° shielding both crosswise and lengthwise. The Trend Series is moderately priced and uses 430ma rapid-start lamps. Two-lamp, three-lamp and four-lamp units are offered in four-foot lengths. Also offered is a four-lamp, eight-foot tandem luminaire arrangement. Write to Lighting Products Inc., Highland Park, Ill. for Trend Series Bulletin.

Beauty and Originality

2340-S
Colorful Outer Glass Cylinders in Amber — Flame — Green—Smoke and Magenta. Also available in one cord drop.

2300-Q
Shown in Florentine White and Gold Finish. Available in Multiple Groupings, Pull Down and many other fixture types.

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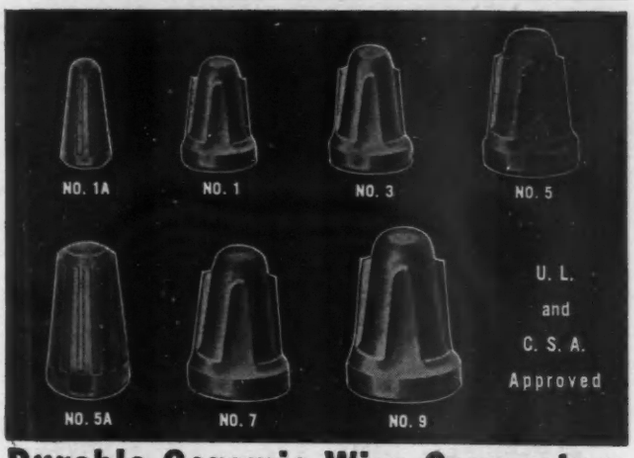

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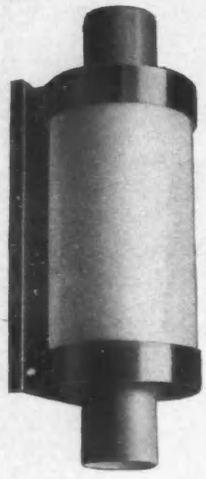
LANTERNS, LIGHTING FIXTURES & LIGHT STANDARDS



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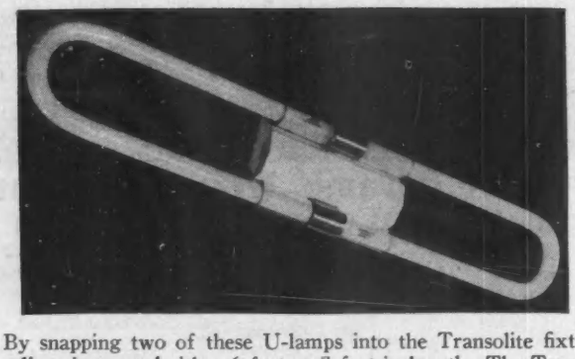
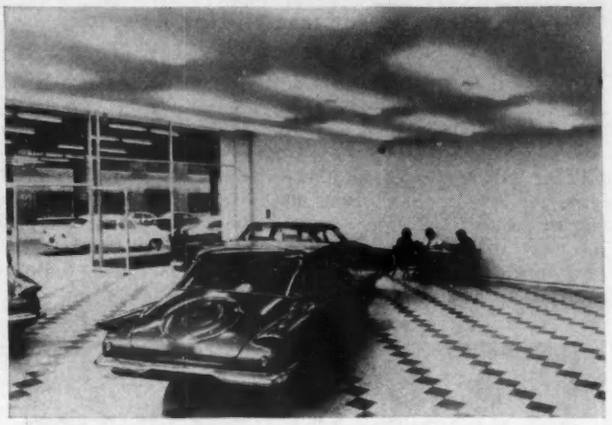
A New Concept in Lighting by Transolite

The principal activity of Transolite Corporation is the manufacture and sale of a new and different type of lighting fixture which was designed to hold U-lamps. These lamps have never before been used for industrial use. They are nothing more than straight lamps which are bent by a special process into U's so that a standard 96T12 or 8 foot lamp becomes a 4-foot U-lamp giving off the same amount of light, namely 5600 lumens as a standard straight lamp while a standard 72T12 or 6 foot lamp becomes a 3-foot U-lamp giving off the same 4100 lumens as a standard straight 6-foot fluorescent lamp.



By snapping two of these U-lamps into the Transolite fixture an elipse is created either 6 feet or 8 feet in length. The Transolite fixture 8½" x 12" x 4½" can, therefore, hold either two 6 foot or two 8 foot lamps. Since the fixture utilizes a socket with snap-in contacts on the base pin, excellent electrical contact results and loosening by vibration is prevented. The socket floats and there is no strain on the contacts. The fixture is made to cantilever the tubes so the lamps are suspended from the fixture without sag. The base pins are hidden by the fixture.

The fixture can attach to all types of raceway channels by simply plugging them in and locking the fixture to the channel by wingnuts or sliding catches. In addition, the fixture can be attached to standard 4 inch boxes.



The net result of this technique is an estimated labor saving of 20-25 percent due to ease of connecting the fixtures and U-lamps to the channel which is suspended from the ceiling by hangers after being wired on the floor using predetermined socket spacing by the electricians on the job. Also, maintenance is facilitated due to the ease of replacement of ballasts, fixtures and lamps. The problems of shipping the U-lamps are reduced since the 8 foot regular lamps are now reduced to 4 foot U-lamps resulting in ease of handling and shipping. The size of the fixture is reduced from 8 feet to only 1 foot which will result in less shipping and handling problems. It is expected that by the end of 1960 the 6 foot U-lamps which are actually 12 foot lamps bent into 6 foot U-lamps will be available. Since the longer lamps can also be held by the Transolite fixture, a significant increase in lighting area will result.

Although the system was basically designed to be used in combination with a luminous ceiling so that evenly distributed light of a high foot-candle level could be distributed over the room area, it is possible that the fixtures and U-lamps could also be used in large areas where bare lighting is normally used such as warehouses, supermarkets, and industrial plants.

Special types of design patterns can be worked out in different colors using the uniqueness of this type of fixture and the U-lamp.

Since the Transolite fixture has practically no depth, it can reduce the amount of ceiling space required to mount the lamps.

For further information write: Transolite Corporation, Dept. A48, 515 Madison Avenue, New York 22, New York.

Rockwell-Standard Subsidiary Expands Lighting Products Division

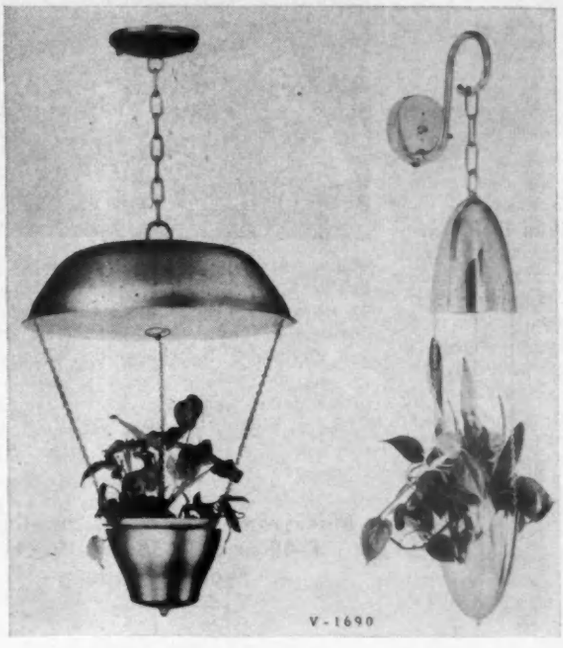
In a major expansion move, Kerrigan Iron Works Company, a wholly owned subsidiary of Rockwell-Standard Corporation is now installing machinery and equipment for the manufacture of seamless, round-tapered aluminum lighting standards. This announcement was made by Mr. C. A. Cooper, Vice President of Rockwell-Standard Corporation, in charge of the Company's Miscellaneous Products Group—and responsible for the overall operation of the Kerrigan subsidiary. He stated that this expansion rounds out the firms line of lighting standard products and will enable Kerrigan to obtain a larger share of this growing market.

Mr. Cooper also commented that most of the nation's streets and highways are inadequately lighted, but that through such activities as the press, utility and municipal promotions, the general public is now becoming increasingly aware of the benefits of well lighted streets.

In discussing this new operation, Kerrigan's General Manager, Stephen N. Krist, stated that in this process the shaft is formed from aluminum tubes by the spinning method and that this type lighting standard is frequently specified for the new Federal super-highways . . . principally for lighting interchanges, bridges, entrance and exit ramps and areas of drived decision . . . in addition to streets and parking areas generally. With the addition of the round aluminum pole, Kerrigan now manufactures a complete line of steel and aluminum equipment—shafts in both the round and octagonal tapered designs, mast arms and brackets, traffic signal standards and strain poles, overhead sign and lane marker structures, floodlighting standards, and other area lighting shafts for service stations, campuses, estates and parking areas.

New Planter-Lights by Virden

Bright, new ideas from Virden Lighting, originators of "the light idea"—lighting fixtures that double as planters! Pictured here are the V-1690 (chain hung) and V-1695 (wall unit). Both are beautifully finished in polished brass . . . are perfect to add unique, interesting lighting and decoration in kitchens, dinettes, family rooms, accenting fireplaces . . . wherever something "out of the ordinary" is desired. For additional details, write for Virden Lighting's new free brochure No. 140. Direct inquiries to Virden Lighting, division of John C. Virden Company, 5209 Euclid Avenue, Cleveland 3, Ohio.

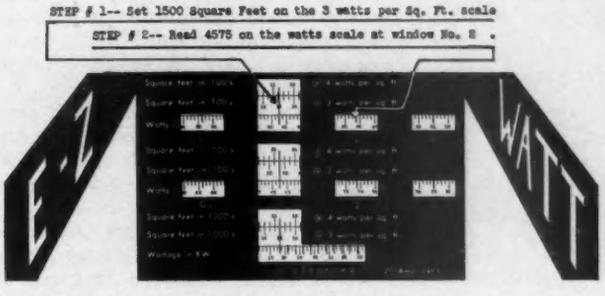


E-Z Watt Simplifies Code Requirements, Eliminates All Mathematics

Net Computed Wattage of the general lighting and small appliance loads is read directly on the watts scale at the window designated by the number of small appliance circuits used.

An illustration of simplicity of operation follows:

To obtain the Net Computed Wattage of general lighting and small appliance loads as given in Example No. 1, Single Family Dwelling, Chapter 9, 1959 National Electrical Code, follow these steps.



Lester Electric Co., L. J. Lester, 4492 West 221st Street, Fairview Park 26, Ohio.

Write for special quantity prices. $2.00 per copy.

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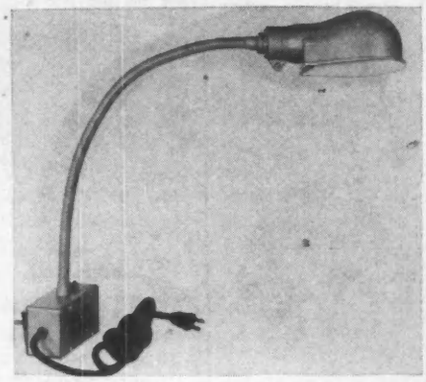
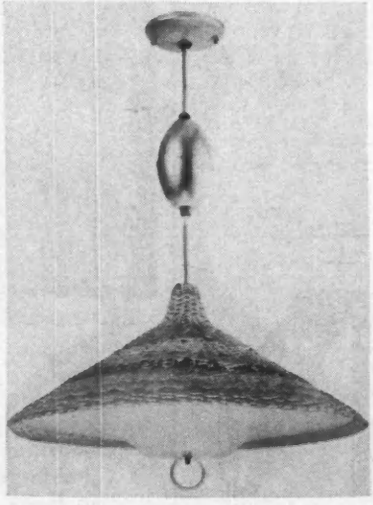
Low Cost Localite with Duplex Outlet Base Announced by Fostoria Corporation



A low cost, flexible arm Localite featuring a duplex outlet base has been announced by Fostoria Corporation. The new heavy duty Localite is especially suitable for rolling tool cabinets or for repair, assembly and inspection benches where soldering irons, glue pots, small power tools and other electrical equipment must be plugged in. The light can be easily attached by hand to steel or wood work benches by means of a simple clamping device, or it can be attached to any surface by drilling mounting holes through the duplex outlet box. An 18" high quality steel flexible arm permits positioning of the Localite as desired. Reflector is fabricated of heavy stamped steel in one piece and accommodate A-21 lamps with medium screw base in sizes from 15 through 100 watts (not included). The new Localite is supplied in standard vista green baked enamel finish. For more information, write Fostoria Corporation, 1200 North Main Street, Department 52, Fostoria, Ohio.

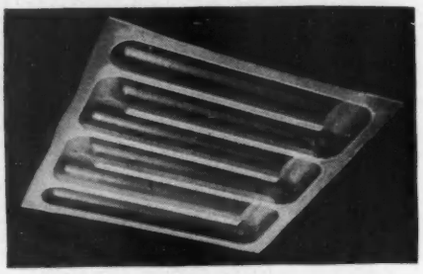
Virden Lighting Announces "New Custom Creation" Pulldown



Pictured here is one of Virden Lighting's newest creation of "the light idea", the Sun'N Sand pulldown (V-1673), one of a new series just introduced. Shades are a blend of imported reed interwoven by hand with accent strips of sparkling brass. Diffuser in satin white styrene, cord is white and adjusts from 20" to 56". A similar pulldown 17" in diameter (V-1672) also available.

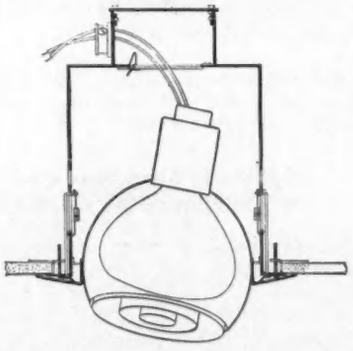
For additional information on these and other "New Custom Creations", write Virden Lighting, division of John C. Virden Company, 5209 Euclid Avenue, Cleveland 3, Ohio. Specify free brochure No. 140.

Molded-glass Shapes



New molding technique permits lamp diffusers or other glass shapes to be made of ultra-thin glasses and still retain the intricate designs obtainable by press molding. Pictured is .050" lime glass shape with ¼" groove forming a zig-zag path. Additional details available from: James B. Wright, Mgr., Cersolsun Research Corporation, P. O. Box 26, Warren, Pennsylvania.

Markstone Introduces Smallest R-40 or PAR-38 150-Watt Eyeball Made



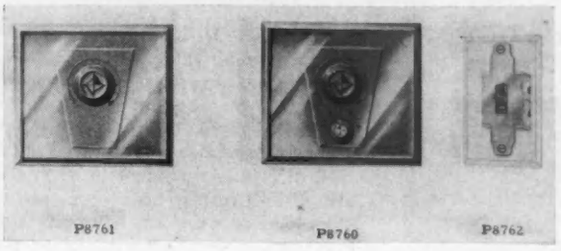
Markstone Mfg. Co., Chicago, has just introduced a new 150-Watt Recessed Eyeball fixture for stores, offices, auditoriums, lounges, theatres and display rooms or windows. It is the smallest 150-watt eyeball fixture made. The frame of the unit fits into the contour of the ceiling. Streamlined design, coupled with "T-N-T" mounting, provide smart appearance and quick simple installation.

The remarkable new eyeball unit measures only 6" in diameter and accommodates a 150-watt R-40 or PAR-38 Spot or Flood lamp. It rotates a full 360° horizontally, tilts 41" vertically and is available with louver if desired. Available in steel or aluminum, with Satin Plated Brass, Chrome, Copper or Painted Eggshell finishes. Clip-on louvers are Matte Black or can be made to match eyeball and trim. Easy 3-step "T-N-T" mounting is both time and labor-saving.

Write to Markstone Mfg. Co., 1531 North Kingsbury Street, Chicago 22, Ill.

Electronic Budget Dimmer Marketed by Progress Mfg.

Progress Manufacturing Co. has made available the first of a series of four dimming controls, the Electronic Budget Dimmer (P 8762), dramatic and effective light control for any room in the house, retailing at only $6.85.

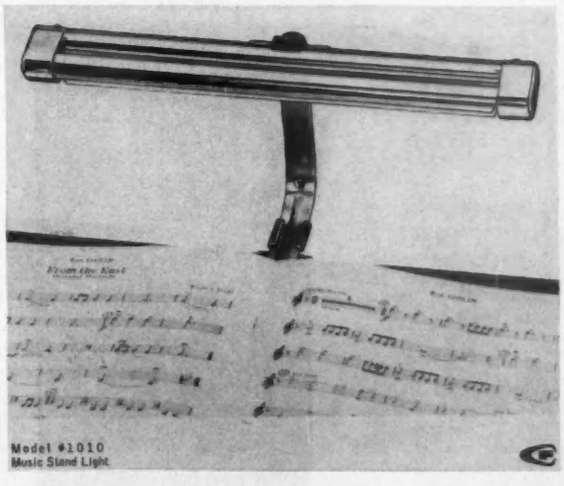


Now, light sources (including lamps) take on new and welcome versatility, as dimming helps attain the most appropriate light level for any activity, the most flattering light level for furniture, draperies, rugs, No less important, dimming harmonizes lighting to mood, atmosphere and spirit of special occasions.

The Electronic Budget Dimmer's three positions are "HI", "Mood" and "Off"; it replaces standard wall switch without changing wiring or wall plate. For incandescent fixtures and lamps only, 300W Capacity.

The Progress Electronic Budget Dimmer brings not only a new dimension of convenience and flexibility of lighting, but greatly increases life of light bulbs, while decreasing electric bills—particularly when used in industrial or commercial applications. For additional information, write to Progress Manufacturing Co., Castor & Tulip Sts., Phila. 34, Pa.

Light Weight Music Stand Light Introduced by Fostoria Corporation



A small, light weight fluorescent light for music stands, pianos, spinets, and small organs has been introduced by Fostoria Corporation, manufacturers of the famous Faries lamps. The new Faries light, known as the Model #1010 Fluorette, weighs only 10 ounces and is handsomely finished in beautiful anodized gold aluminum. Reflector, which is 12½" long by ¾" wide, accommodates a standard T-5 8 watt fluorescent tube. The Fluorette is furnished complete with tube, ballast, cord and in line switch. For more information, Write Fostoria Corporation, 1200 North Main Street, Department 67, Fostoria, Ohio.

ANNOUNCING

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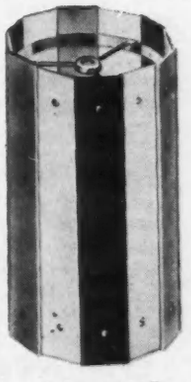
(One block east of Avalon Boulevard)



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3. Attractive cadmium plate, brushed chrome effect, may be used as plated or will act as excellent paint base.

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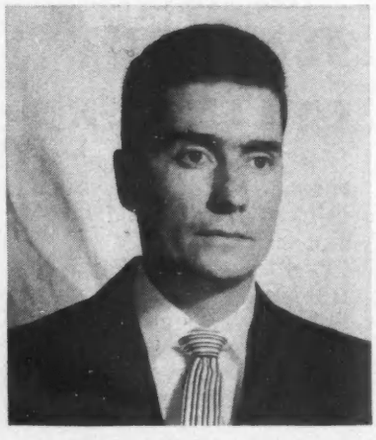
Robertson Appointment

Robertson Transformer Company, Blue Island, Ill., maker of ballasts for fluorescent lights, has assigned the responsibilities of Factory Superintendent to Warren C. Ferguson, Vice President.



Ferguson, 37, is a graduate engineer of Illinois Institute of Technology and holds a lieutenant's commission in the U. S. Navy reserve, states James H. Kellogg, Robertson president.

Manufacturer Representative

Aluminum Louvre Corporation appoints Bill Brown Sales Agency in Central and Southern United States territory.

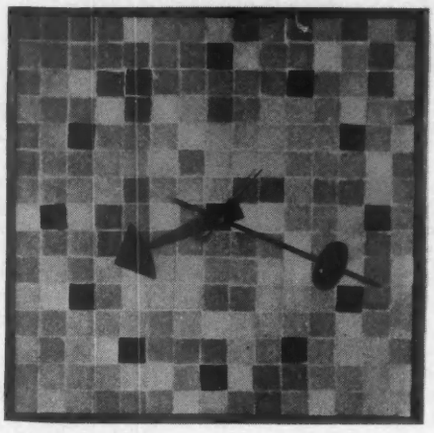
The appointment of Bill Brown Sales as manufacturers representative for the Central and Southern United States has been announced by Irving Greenburg, president of the Aluminum Louvre Corp., Freeport, New York.

Mr. Brown and his able staff are well known in the electrical component supply field with which they have been associated for many years.

The Aluminum Louvre Corp., one of the largest exclusive manufacturers of aluminum egg-crate is embarking on a broad expansion program to develope new markets and applications for their product.

Manufacturing facilities are located in Freeport, L.I., N.Y. with office and show room at 101 Park Avenue in New York City.

Howard Miller Clocks Offered in Master Clock System



One of the fifteen Howard Miller Clocks available in the Minneapolis-Honeywell Clock-Master system on an exclusive basis. Clocks were designed for the Howard Miller Clock Company by George Nelson and are being offered by Honeywell for key public areas . . . this particular style has a mosaic face in shades of blue or beige.

As a result of a comprehensive survey of architects that called for higher styling in clock-slave systems, Minneapolis Honeywell has inaugurated an entirely new look in its ClockMaster system for institutional installations.

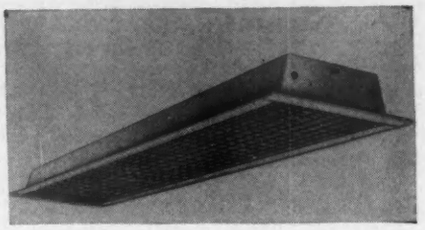
To provide attractive and unusual designs for key public areas, Honeywell has collaborated with the Howard Miller Clock Company of Zeeland, Michigan, to add fifteen clock faces designed by George Nelson. These clocks represent the height of fine industrial design and incorporate a wide variety of materials, color and scale in their construction.

The Howard Miller clocks are available with the secondary units and programming systems accuracy-regulated by Honeywell's Clock-Master clock for use in hospitals, schools, banks, and offices.

The Aurora Compact — A New Economy Version

First, the Aurora was made shallower, slimmed to 3½" in depth. Then the socket plate was removed and replaced with a new thin socket plate that was mounted on the end panel. These simplifications in production allow new *low* prices.

Maximum photometric efficiency and control of lighting were the prime factors in design of Aurora Compact. This economy version still offers such extra features as baked-on enamel finish that gives a minimum reflectance factor of 86% a warp-proof heavy gauge steel body that is rigidly constructed. Diffusers are conveniently hinged on both sides for easy



maintenance. Modular dimensions in beautifully simple lines, will give fine lighting while harmonizing with any type decor.

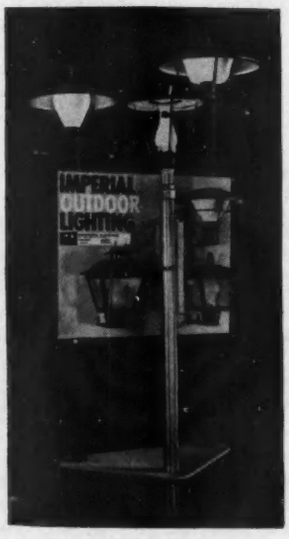
The Aurora Compact is available in 1x4 and 2x4 rapid start units for lay-in or flange-type installations. Choice of four varied diffusers, aluminum or plastic egg-crate, the inverted hexagonal prismatic "Starlite" lens, or the new polystyrene diffuser. Easy and fast installation is accomplished by U-Bar or Jiffy Clip mounting.

Write to Metalcraft Prod. Co., Inc., 6225 State Road, Phila. 35, Pa.

Two New Emerson Imperial Outdoor Lantern Displays

Two new outdoor lighting displays designed to occupy a minimum of floor space in distributor and dealer showrooms are announced by The Emerson Imperial Lighting Company, St. Louis, Mo.

The larger of the two displays accommodates six lanterns and three posts, or three porch fixtures can be mounted in place of the porch lanterns by removing the bracket arm from the back panel. The base is 20" x 36" to fit neatly into a corner or against a post. The small display shows either three post lanterns or two porch fixtures and one post lantern. Diameter of the base is 24". Both displays are adjustable from a minimum height of 6 feet and are made of rigid plywood construction to eliminate shaking and trembling. Either display can be assembled by one man in a few minutes.



Price for the 6-light display is $25.00; (shown) for the three-light display, $12.00. Both displays can be obtained by distributors free of charge with the purchase of a minimum quantity of the fixtures shown.

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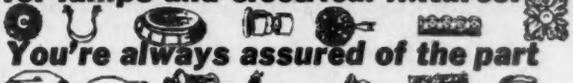

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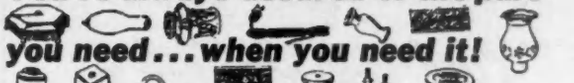

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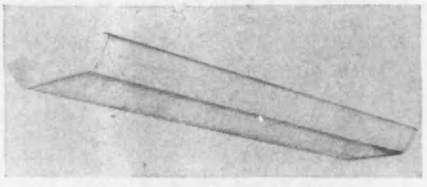
"Demand Design" Fixtures Introduced by Keystone

Three new lighting fixtures announced this month by Keystone Electric Manufacturing Co. feature more compact styling with a wide range of use. Designed to conform to the current lower-ceiling trend, these units are expected by Keystone to prove popular not only in new construction but also in many types of relighting projects.

Common to all three fixtures (Bristol, Northwood and Colony) is a particularly trim and shallow profile. Specifications call for a combination of 18 and 20 gauge construction, providing an exceptionally rigid housing.

Shieldings offered include "Poly-Blok" louvers and color-stable polystyrene in smooth opal or clear prismatic wraparound. Low brightness is assured, according to Keystone, with greater lighting efficiency and easier maintenance.

These new series will be supplied in 2-lamp, 40W, rapid start; 4-lamp, 8-foot tandem RS or 2-lamp, 8-foot slimline models and are available with or without top plates.



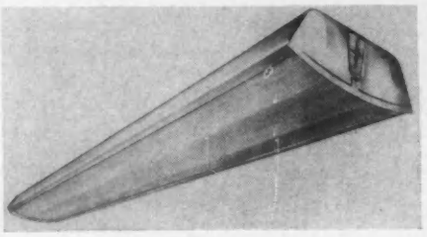
The Colony

It is stated that new manufacturing methods will permit quality construction on these units while making it possible to hold them at an attractive price level.

Keystone Electric, 2228 E. Tioga St., Phila., Pa.

New, Low-Cost Chelsea Fixture Introduced by Smithcraft

A new lighting fixture combining high quality, rugged construction, and low cost, has been introduced by Smithcraft Lighting, Chelsea 50, Massachusetts. The Chelsea, a new plastic-enclosed unit, measures nearly 13" wide.



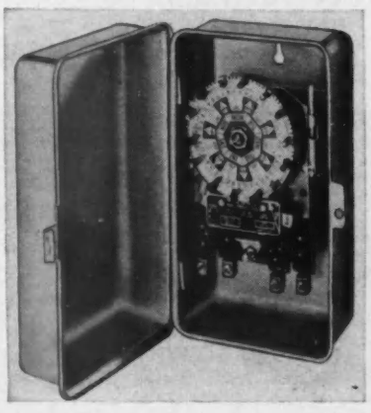
Its clean, trim expanse of plastic eliminates dark metal bands at the ends of the unit, and offers free-flowing lines in continuous runs. The Chelsea comes equipped with either acrylic or polystyrene shielding. Available in 2, 3 and 4-light units, the new Chelsea may be surface-mounted with top reflectors, or pendant-mounted with a high percentage of uplighting.

For continuous mounting, a good-sized hole simplifies through-wiring, resulting in easy installation. Another great time-saver are the patented Smithcraft slide-grip hangars, used for hanging the uplighting units.

The new Chelsea features very low brightness readings. Its brightness readings meet rigid standards, making the Chelsea an ideal lighting fixture for schools, stores, offices or showrooms. For further information and literature, write to: Smithcraft Lighting, Chelsea 50, Massachusetts.

New 7-Day Time Switch Has 55 Amp. Capacity, Suited for Schools

A new 55-Amp. 7-Day time switch has been announced by Tork Time Controls, Inc. The switches are equipped to handle the heaviest lighting loads, and, with Reserve Power, assure automatic control on schedule in the event of power failures.



According to the manufacturer, the new units are the perfect answer to the needs for foolproof control of heavy lighting loads. The top capacity of 55 amps. per pole will eliminate the need for contractors on many installations. Typical uses would include control of indoor and outdoor (protective) lighting for schools, institutions, public buildings, industrial plants, and for parking lot lighting.

Individual ON-OFF lighting schedules for each day of the week can be set on the 7-day dial. When weekend or selected day omission is desired, this too is part of the master program scheduled on the one dial. Lights are turned ON and OFF each day at the times required.

Lug terminals, taking up to #6 wire without bending, make for quick, easy, and solderless connections.

The units may be ordered without case but with bracket, or in Flush Enclosure, for panel-board or recessed wall mounting.

Further information is available, without obligation, from Tork Time Controls, Inc., Mount Vernon, New York.

Westinghouse Appoints Lindsey Manager of Little Rock Plant

Earl G. Lindsey has been named works manager of the Little Rock plant of the Westinghouse lamp division, according to James E. Woodall, div. mfg. mgr.

The Little Rock plant produces more than 150 million light bulbs a year. Included among these are standard household light bulbs in various wattages, sun lamps, infrared heat lamps, mercury-vapor lamps, and spot and flood lamps. The plant supplies these lamps to the entire south and west area of the nation.

A native of Forestville, Ohio, Mr. Lindsey holds an AB degree in science from Marshall College.

In 1942 Mr. Lindsey joined Westinghouse at the Fairmont, W. Va. plant as a foreman and industrial relations assistant. In 1948 he was transferred to the Little Rock works as a foreman in the lamp assembly department. In March 1960 he was promoted to assistant works manager of the plant.

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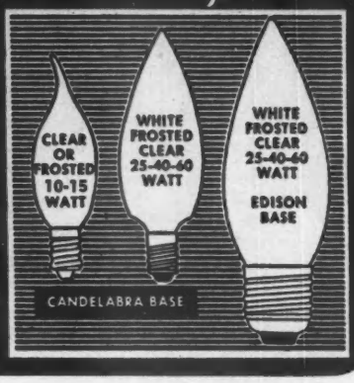

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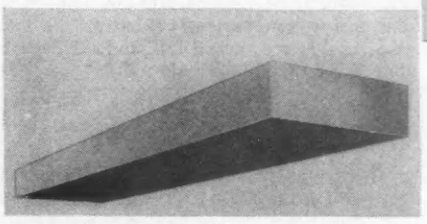
New National Sales Manager

L. J. Friestedt has been appointed National Sales Manager for the Good Manufacturing Company, 1015 No. Halsted Street, Chicago, Illinois. He will handle al marketing activities for fluorescent lighting fixture products.

The VEGA, a New, Moderately-Priced Line of Surface-Mounted Fixtures

VEGA's trim, clean lines and shallow depth (only 3½"), proves that here is something new in fixtures.



Clean simplicity will make the VEGA right at home in any decor.

Light-tight framed diffuser, electronically sprayed, baked-on enamel finish. Inside, its clean design makes for easier maintenance, as does the diffuser which is hinged from either side. The VEGA offers as much lighting efficiency for its size as does any other surface-mounted fixture.

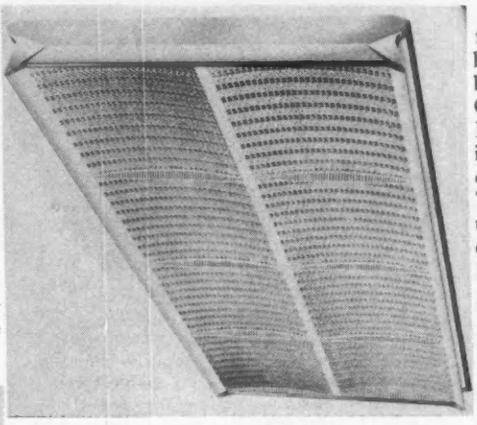
The VEGA is versatile too! It is available in 12-, 18-, 24-, and 48-inch widths . . . from a 2-lamp 1x4 unit to an 8-lamp 4x4! Choice of aluminum or plastic eggcrates, the inverted hexagonal prismatic "Starlite" lens, or the new polystyrene diffuser.

Slim design, quality construction and versatility . . . these three factors combined into one line of fixtures.

For full details and catalog write to Metalcraft Prod. Co., Inc., 6225 State Road, Phila. 35, Pa.

New Sculpturama with All Curved Styling

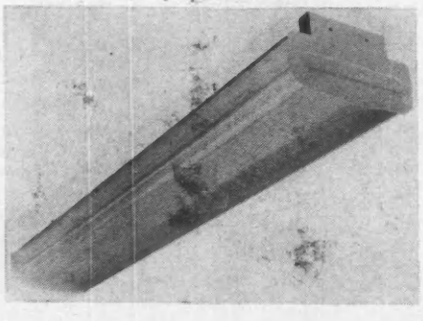
Sunbeam Lighting Company of Los Angeles, Calif. and Gary Indiana, points to the combination of the Sculpturama design with Holophane Prismalume for the culmination of the sculptured look in lighting.



This new, shallow QRH7500 Series is designed primarily for surface mounting. The blend of curves from its illuminated metal sides and inwardly curved lens bottom adds a friendly atmosphere to any commercial interior.

Now available for 4-lamp operation, this all curved Visionaire breaks the low brightness barrier for extremely shallow luminaires. The acrylic lens panel with reinforcing prismatic ribs scientifically controls the light distribution to the seeing task and reduces direct glare from normal viewing angles. The low brightness of the curved metal side panels complements the low brightness of the Prismalume. The lens panels are firmly framed in metal and may be opened from either side or completely removed without tools. No latches or hinges mar the architectural appearance of these units. Sunbeam Lighting Company, 777 E. 14th Place, Los Angeles, and in Gary, Indiana at 3840 Georgia Street.

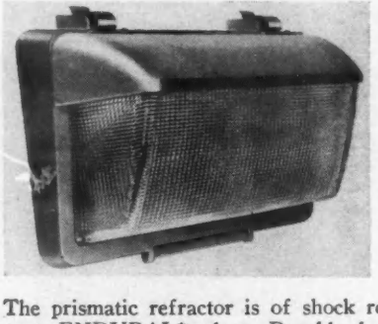
New Light & Power Utilities Fixture



A labor-saving fluorescent fixture which features a swing-down diffuser and a hinged reflector was introduced this month by Light & Power Utilities Corporation, Olive Branch, Mississippi. The PR 240-R Prisline allows installation personnel to install both the reflector and diffuser without tools on a previously mounted channel. The prismatic plastic wrap-around diffuser unit incorporates a clear basket-design and can swing down from either side. It has longitudinal ribs on the side and a small pyramid design on the bottom. The V-type reflector, which houses the ballast and sockets, hinges down from either side of the channel. It mounts two 40-watt rapid start lamps and gives extremely high efficiency with low brightness. Cleaning and electrical maintenance is facilitated by the fixture's separate sections.

Wall Mounted Luminaires

Holophane Company, Inc., announces the 480 Series wall mounted luminaire for 300 watt lamp designed for outdoor wide spread lighting.



The prismatic refractor is of shock resistant ENDURAL* glass. Durable lacquered, cast aluminum, weatherproof housing with reflector, holds the lens and has a stainless steel hinge at the bottom on which the face of the unit rotates for access. Light is controlled by the reflector assuring longer lamp life, increased output and more uniform luminosity.

No. 480 can be installed through three mounting holes. The unit can be opened without tools. A safety chain holds the glass in an open position for easy relamping.

For further detailed engineering information consult: Holophane Company, Inc., 342 Madison Avenue, New York 17, N. Y.

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19 Electrical Engineers Made Fellows of A.I.E.E.

The Board of Directors of the American Institute of Electrical Engineers, representative society of the electrical engineering profession, has elevated 19 of its members to the grade of Fellow for outstanding contributions to the profession, N. S. Hibshman, Institute Secretary, has announced.

The new Fellows and their citations are:

Marvin A. Baker, manager of product engineering, Direct Current Motor and Generator Department, General Electric Company, Erie, Pa., "for contributions to large rotating amplifying generators, d-c motors and generators."

Frank M. Clark, consulting engineer-insulation, General Electric Co., Schenectady, N. Y., "For contributions to development of electrical insulation through the application of chemical principles."

Walter J. Creamer, head of the Electrical Engineering Department, University of Maine, Orono, Me., "For contributions to electrical communications and to electrical education and literature."

Walter Criley, professor of electrical engineering at Vanderbilt University, Nashville, Tenn., "For contributions to personal professional development of engineering students."

Howard H. Davenport, outside plant and transmission and protection engineer, Southwestern Bell Telephone Company, Little Rock, Ark. 'For contributions to military and civil telephone communications."

Hilding F. Gidlund, superintendent of the Electrical Distribution Department, Public Service Company of Colorado, Denver, Col., "For contributions to development and operation of a large electric distribution system."

Gerhart W. Heumann, senior engineer on power utilization problems, General Electric Company, Schenectady, N. Y., "For contributions to design of magnetic controls."

Ray D. Jones, liaison engineer, Fort Wayne Laboratory, General Electric Company, Fort Wayne, Ind., "For Contributions to extended range and life of small motors, generators and dynamotors for military application."

J. Harold Karr, products manager, universal and d-c motors, Robins & Myers, Inc., Springfield, O., "For contributions to design of electric motors and automotive directional signals."

Marvin Lee, president, Burndy Corporation, Norwalk, Conn. "for contributions to engineering development of electrical connectors and connector tools."

Stanley B. Lent, superintendent of power, Metropolitan Transit Authority, Boston, Mass., "For contributions to transit system electrification and engineering management."

Marion R. Lory, engineering manager, Large Rotating Apparatus Department, Westinghouse Electric Corp., East Pittsburgh, Pa., "For contributions to design of large synchronous motors and electrical couplings."

Fred M. McCloska, partner in charge of the Nuclear Department, Sargent & Lundy Engineers, Chicago, "For contributions to design and application of electric equipment to power systems industrial and nuclear plants."

Henry J. Nevitt, consulting engineer, Ericsson Telephone Sales Corporation, Rio de Janeiro, Brazil, "For contributions to high quality international communications systems in Latin America."

Jay W. Picking, manager, Control Division, Reliance Electric & Engineering Company, Cleveland, O., "For contributions to development of automation by means of electronically controlled systems."

Irvine E. Ross, Manager, engineering, Specialty Motor Department, General Electric Company, Fort Wayne, Ind., "for contributions to development of communications at high altitudes."

Clarence F. Schwan, Reliance Electric & Engineering Company, Cleveland, O. "For contributions to design of rotating machinery, especially for high-frequency induction heating."

Gareth G. Somerville, manager, Process Development Laboratory, Distribution Transformer Department, General Electric Company, Pittsfield, Mass., "For contributions to improvement of magnetic cores for power transformers."

Charles R. Vail, professor and chairman, Electrical Engineering Department, Duke University, Durham, N. C., "For contributions to electrical engineering teaching and to synthetic insulations."

NEMA Standards Publications

The following new and revised publications have just been issued. Copies are available at the prices indicated from the National Electrical Manufacturers Association, 155 East 44th Street, New York 17, N. Y.

FB 1-1960 Conduit and Cable Fittings and Accessories

Fittings and accessories for flexible metallic conduit, service entrance cable, armored cable and nonmetallic sheathed cable are covered in FB 1-1960. Also covered are certain accessories for rigid conduit and electrical metallic tubing. (40 cents per copy)

HT 5-1960 Mild- to Medium-strength Carbon Steel Castings Used for Hydraulic Turbines

HT 5-1960 is a new publication covering the physical and chemical properties, heat treatment, tests, surface finishing, inspection, test and repairs of mild- to medium-strength carbon steel castings, made by either the open hearth or electric furnace process and having a minimum ultimate strength not exceeding 70,000 psi. (20 cents per copy)

HV 1-1960 Summary of Characteristics of Apparatus Insulators

Table II in HV 1 has been revised to give the latest cantilever strength values for cap- and pin-type mixed apparatus insulators. Table I deals with cap- and pin-type apparatus insulators, and Table III with post-type insulators. (25 cents per copy)

SG 2-1960 High-voltage Fuses

Distribution cutouts and distribution oil cutouts, and their fuse links, distribution enclosed single-pole air switches, power fuses and current-limiting resistors are covered in this revised book. Information is given for:

1. Ratings—continuous and short-time current, voltage, frequency, interrupting and load break.
2. Tests—temperature rise, dielectric, interrupting, short-time current, load break, radio influence voltage, and time current curves.
3. Application—selection of voltage and current ratings, usual service conditions, and spacings and clearances.
4. Manufacturing—nameplate marking, dimensions, mounting bracket, color coding, interchangeability of fuse links.

($3.00 per copy)

SK 50-1960 EIA-NEMA Standards for Color Coding Semiconductor Devices (Diodes and Rectifiers)

This new publication was formulated by the Joint Electron Device Engineering Council and adopted and issued jointly by the Electronic Industries Association and NEMA. It covers the color coding of semiconductor diodes and rectifiers for which type numbers have been assigned by JEDEC. (25 cents per copy)

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RESIDENTIAL LIGHTING REPRESENTATIVE WANTED. Popular priced—well styled. Wisconsin, Illinois, Indiana, Michigan and Ohio. Box AU-31, LIGHTING, 114 East 32nd St., New York 16.

SALES MANAGER—for manufacturer of complete residential lighting. To the man who can prove himself, this is more than a commission job. This man must have past successful record of organizing and supervising sales force on a national scale, selling to distributor, jobber, large display dealer and some connections with chain store buyers. We will pay salary, commission, traveling expense and etc. Don't miss this opportunity to earn part of the profits you help create. Send complete resume and salary requirements first letter. Your reply in strictest confidence of course. Box AU-32, LIGHTING, 114 East 32nd St., New York 16.

MANUFACTURERS REPRESENTATIVE now calling on the electrical wholesale jobber and large dealer wanted by one of America's fastest growing manufacturer of residential and commercial lighting fixtures. Many active accounts in Iowa and Illinois. Also Texas, Louisiana and Oklahoma. Box AU-33, LIGHTING, 114 East 32nd St., New York 16.

ORNAMENTAL FIXTURE DESIGNERS with knowledge of period styles and shop practice needed by well established New York manufacturer. Box AU-34, LIGHTING, 114 East 32nd St., New York 16.

SALESMEN; calling on lighting distributors and etc., to represent prominent lighting lines for established agency. New England, New York State, Pennsylvania and Washington-Baltimore area available. Lucrative potential assured due to specific sales advantages. Advise lines carried, territory and other pertinent data. Box AU-35, LIGHTING, 114 East 32nd St., New York 16.

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AGENT desires additional line for Metropolitan New York, New Jersey. Excellent coverage. Have good accounts. Box AU-37, LIGHTING, 114 East 32nd St., New York 16.

MANUFACTURERS REPRESENTATIVE established following, electrical and lighting distributors, desires indoor & outdoor lighting line. New York Metropolitan area. Box AU-38, LIGHTING, 114 East 32nd St., New York 16.

SALESMAN for Crystal and Bronze Lighting fixtures with following for California, Illinois, Michigan, Ohio and other choice territories open for a live wire. Old established, well known firm. Commission basis only. Write BIBI, 25 West 26th Street, New York 10.

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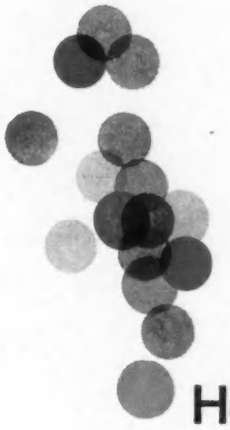

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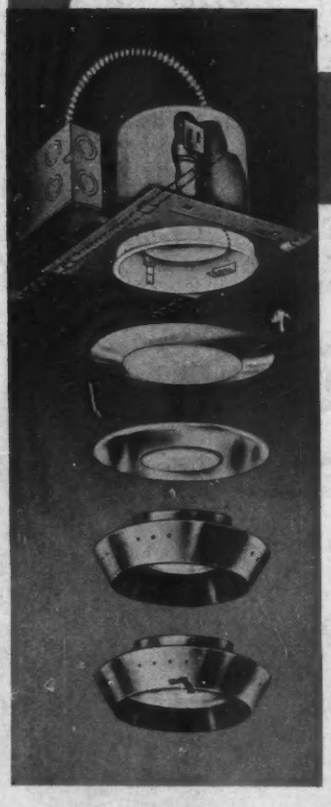

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